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The User Experience of Participation: Tracing the Intersection of Sociotechnical Design and Cultural Practice in Digital Ecosystems

David L. Jones
Old Dominion University

THE USER EXPERIENCE OF PARTICIPATION: TRACING THE

INTERSECTION OF SOCIOTECHNICAL DESIGN AND CULTURAL

PRACTICE IN DIGITAL ECOSYSTEMS

by

David L. Jones
B.A., May 2001, Morehead State University
M.A., May 2003, Morehead State University

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Approved by:

Liza Potts (Director)

Joyce Neff (Co-Director)

Kathie Gossett (Member)

Dana Heller (Member)

Clay Spinuzzi (Member)

Kevin DePew (Member)

Julia Romberger (Member)

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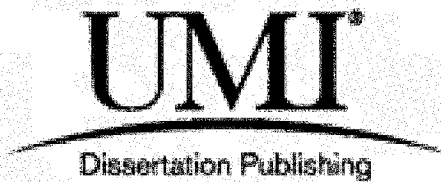
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ABSTRACT

THE USER EXPERIENCE OF PARTICIPATION: TRACING THE INTERSECTION OF SOCIOTECHNICAL DESIGN AND CULTURAL PRACTICE IN DIGITAL ECOSYSTEMS

David L. Jones
Old Dominion University, 2013
Director: Dr. Liza K. Potts

In this dissertation, I combine methods from Technical Communication, Cultural and Media Studies, and User Experience Design to trace the social and creative practices of social web participants. Using actor network theory, I explore the concept of *participation* as social and creative practice that demands coordinative knowledge work enacted within a cultural space. Leveraging the insight gained from this research, I develop the user experience of participation as a research and design methodology that privileges the movement of people and information in order to structure and re-structure social connections.

I explore this methodology through three intersections between people and technology. The first is between the practices of digital participants within online cultures and the policies aimed at regulating their social and creative work. Second, participation is defined in the ways that local exigency of participants intersects with the implementation of regulations and policies through technological design. Finally, a third intersection appears when participants work to restructure their relationships to policies and technologies through coordinative knowledge work that uncovers and links information within digital ecosystems.

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INTRODUCTION: CONCEPTUALIZING THE SOCIAL WEB TO
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1.1 INTRODUCTION

In 2008, a small game developer from Great Britain named Media

Molecule released *LittleBigPlanet*, a game in which much of the appeal for

players is a social web experience focused on user-generated content.

LittleBigPlanet offers a conventional single-player platform gaming experience.

The player can move left and right across the screen to dodge obstacles, defeat

non-playable characters controlled by the computer, collect items and score

points, and reach complete individual levels to achieve the game's goals.

However, *LittleBigPlanet*'s mass appeal with fans stems from the game's tools

for facilitating user-generated content that players can share across a social

network. Players can use digital tools provided within the game to produce their

own characters and game levels. According to VGChartz.com, an online sales

tracking service for the video game industry, *LittleBigPlanet* sold just over one

million copies worldwide within the first 45 days of its 2008 release. The sequel,

LittleBigPlanet 2 released in 2011, has sold on the same pace. Combined, these

two games have sold approximately 7.5 million copies.

Using a networking service operated by Sony, players can then share the

content they produce online so that others can play or use the digital assets.

Players share their content via Sony Computer Entertainment's proprietary online

service, the Playstation Network (PSN). The game is a central component of a

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social web experience in which players can connect with one another to share these custom-made costumes and levels. Thus, the core attraction of the game is the social experience of producing and sharing content, and then playing the content that others have created. Four years into the franchise's life, players have produced nearly 7.3 million player-created levels available to play online (Media Molecule, 2012). And that does not count the number of levels that players have removed voluntarily, or have been removed by Media Molecule.

In addition, players who participate in this social experience often coordinate their activities across a wide range of other social web tools, including Facebook and Twitter. Using these tools, they can share more than player-generated in-game content; they also share ideas and tips for making the best use of player tools. Participants—including those who create content, play the games, and perhaps take part in online discussions—collaboratively trace information that is relevant to their experiences playing and working with the game. And they can collaboratively produce content using the game and a wide range of social networking tools. In doing so, these individuals participate in knowledge work that is mediated via digital networks and applications.

For researchers and designers, tracing the social and creative practices of these online communities, organizations, and individuals is critical. These systems are designed and developed to support online cultures. However, such design considerations often do not extend beyond the interfaces of digital applications. It is now important to understand the architecture of these digital spaces, which can be explored at the intersection between the design and

implementation of technological infrastructures and cultural use. Interactions across social networking services and other internet technologies have become a central communications activity for billions of people worldwide. Major social networking sites such as Facebook and Twitter have seen dramatic growth in their use. Recent data from comScore suggests that 98% of Americans who use the internet also engage in social networking activity, and that at least 1.4 billion people worldwide use a social networking service such as Facebook or Twitter (Shaw, 2012). According to Shaw, Facebook leads the way, having accumulated nearly 800 million total unique visitors as of 2012. Another May 2012 research report from the Pew Internet and American Life Project states that 8% of Americans use Twitter "on a typical day," an increase from only 2% in 2011 (Smith & Brenner, 2012). Those who use such tools and services work within ecosystems of people, technologies, organizations and groups, and practices. Academic researchers and industry-based designers need to better understand how such tools are used within digital cultures and the ways technological design and cultural practice impact the ways such technologies are used.

As discussed in richer detail in Chapter 2, the field of technical communication offers a unique set of approaches to culture, practice, and technology that is well suited to exploring these topics. In discussing the central questions of current technical communication research, Rude (2009) states that scholars must explore how "texts (print, digital, multimedia, visual, verbal) and related communication practices mediate knowledge, values, and action in a variety of social and professional contexts" (p. 176). She argues that technical

communication research is situated at the intersection of creative practices that produce different types of texts, the cultures that provide meaningful context to such activities, and the technologies that support the production of both texts and meaning.

Richer knowledge of the ways these elements intersect is important for research along two critical and parallel lines of inquiry. The first is developing a stronger understanding of online digital cultures and the ways they leverage such technologies for their social practices. The second is using such knowledge to create richer approaches to designing digital technologies that support such online cultures. As the use of social networking technologies increases, the ways that people leverage such tools becomes more and more rooted within the digital cultures that provide meaningful context to these practices. Thus, tracing the intersection between culture and technological design can help researchers and practitioners better support online communities. As discussed in the next chapter, many of these communities may use such tools for knowledge work that supports local causes, produces richer interactions for students in classrooms, facilitates communication among co-workers, or helps coordinate information in the wake of disasters and crises. Designing technologies and technical ecosystems with such cultures and practices in mind is critical for sustaining these communities and their culturally situated practices.

1.1.1 *LittleBigPlanet* as Research Focus

This dissertation focuses on social web experiences that support the production and sharing of player-generated content related to the videogame *LittleBigPlanet*. As Eyman (2008) points out, "Games can serve as objects of study from which technical communicators can learn about interface design, interaction design, and how users engage in complex communication tasks mediated by texts and data visualizations on a large scale" (p. 243). As both industry and scholarly researchers in technical communication explore the design of digital experiences and digitally mediated knowledge work, games provide a rich set of examples through which to explore both the theory and practice of communication design. The case studies in this dissertation demonstrate that games are a rich source for technical communicators to explore knowledge work in the social web. Such research can better inform the ways in which we study online cultures and design the digital tools and infrastructures that support them. If scholars and industry practitioners are to create better approaches for researching and designing social web tools, their efforts must be grounded in a stronger understanding of the cultural contexts in which people participate online. It is just as important to the design of technologies and digital ecosystems to understand why people share content with one another as it is to know how they do so through a specific application or process. Exploring why these cultures collaborate to pursue knowledge work through social web tools is crucial for understanding how those tools should work and support social activity.

This means that researchers and designers cannot simply dig into a single user's specific context. Instead, they must cast a wider net that seeks to better understand a broader ecosystem in which people, technologies, and practices intersect within digital cultures that provide meaningful contexts for digital participation. The central research questions in this dissertation are these:

1. What creative and social practices are important for people within the communities that use *LittleBigPlanet*, and how do these practices support their knowledge work?

2. How does the design of technology and policy intersect with such creative and social practices?

3. What strategies do people participating in these ecosystems use to trace that intersection, and why do they do so?

In answering these questions, this dissertation seeks to outline a methodology that traces the intersections where creative practice, cultural meaning, and technological design meet. These intersections are critical junctures, simultaneously giving rise to the social spaces in which people participate, and to the experiences that emerge from those spaces as that participation is mediated through digital technologies. It is critical then to illustrate how the design of technologies and processes supports or hinders culturally situated creative and social practices. For researchers, doing so means simultaneously producing a stronger understanding of both online cultures and digital technologies. We must use our understanding of each to better illuminate the other. In doing so, we simultaneously learn more about online cultures and

practices as well as the ways in which technologies should be better designed to support them.

LittleBigPlanet is designed to facilitate and encourage the production and sharing of player-generated content, and the game's developer and publisher provide a strong ecosystem of tools and spaces to help players participate. As of August 2012, the official website for *LittleBigPlanet* lists more than 7.1 million player-produced game levels accessible through the PSN. In addition, *LittleBigPlanet* players can search for player-created levels using a web-based service, LBP.me. This service catalogues every player-produced level shared within the PSN, providing tools for players to comment on this content, rate it, and even place it into a queue so that it can be readily accessed when by players when they log back into the PSN through their Playstation 3 consoles.

In addition, Media Molecule, Sony, and many fans within the *LBP* community use social web tools that are not part of Sony's proprietary network, including Facebook and Twitter, YouTube, and many different forum and blogging services. There is no way to adequately track how much *LittleBigPlanet-* related content is produced and shared in these other spaces. Both Media Molecule representatives and digital participants often maintain very active presences on these services. A cursory keyword search of YouTube using "LittleBigPlanet" shows at least 48,000 results as of this writing.[1] Participants often create fan pages, post videos, and build their own fan websites to support

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[1] Potts (2009c) illustrates that communities interacting through social web tools often use a wide variety of different keywords and terms that create problems for tracing and coordinating information. For *LittleBigPlanet*, online communities may also use other keywords, such as "LBP," "Media Molecule," or "MM" when referring to the game or the content they produce.

their participatory activities. Through both digital systems owned by Sony and third-party systems, people communicate in varied and often complex ways. They produce and share content with friends and family members, with companies, government agencies, and other organizations. These interactions often link participants with people they have never met face-to-face. They share content such as text updates, static pictures and screencaptures of other digital media, and video captures of game levels and fan reviews. This communication allows people to trace and coordinate a wide range of information in order to collaboratively develop knowledge that is relevant to them and the communities that they inhabit.

The original 2008 release of *LittleBigPlanet* allowed players to create side-scrolling experiences in which players largely move left or right on screen. Players may jump from one platform to the next, climb or leap over obstacles, or use various objects to combat other non-playable characters and objects within the environment. In 2011, *LittleBigPlanet 2* updated these tools and in-game assets to include new objects, textures, and colors so that players could create a wider range of experiences. No longer limited to simply moving left or right, the *LittleBigPlanet* player community can now produce three dimensional game environments that allow movement in any direction. With the ability to leverage three dimensions rather than just two, players can reproduce virtually any gaming experience possible on a modern video game console such as the Playstation 3. Players can use different colors and textures to visually style their characters and game environments (see Figure 1.1). Digital objects, some of which can be

manipulated or customized, allow players to produce custom levels. Using the in-game interface, these players can select objects, customize their look and some of their interactive behavior, and place them within an interactive space to create game levels. Players can also customize the appearance of their digital avatars within the game—called sack people—to create characters.

Figure 1.1 Screenshot captured from *LittleBigPlanet* (2008), showing the interface available to players for manipulating objects and creating in-game content.
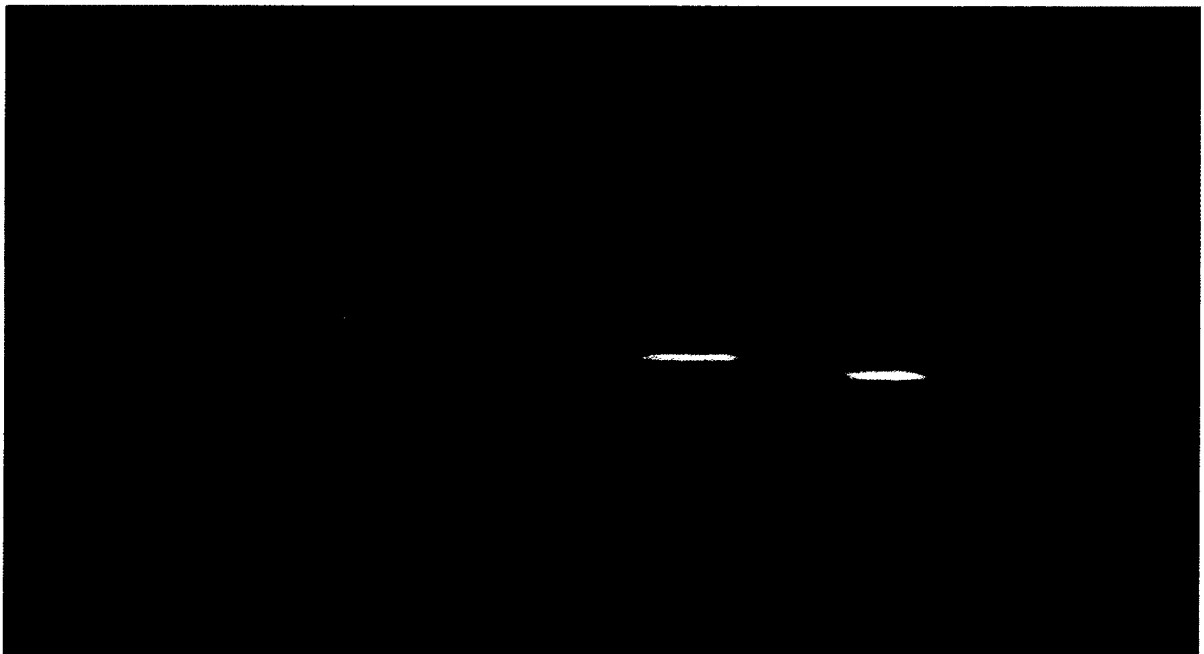
Producing and sharing this content online is one of the central elements of the *LittleBigPlanet* experience. The digital infrastructure supporting the online networking experience is provided by Sony Computer Entertainment. Published for the Playstation 3 game console (PS3), the game taps into a Sony-owned

networking service accessible exclusively through Sony-controlled portals. This service, the Playstation Network (PSN), can link with any PS3 whose owner has access to a broadband internet connection and is willing to create a PSN account. Generating such an account is as simple as creating a username, providing a valid email address, and setting a password. Through the PSN, *LittleBigPlanet* gamers can share the content that they produce using these proprietary tools.

One of the game's central components, then, is a social web experience in which players are encouraged to produce and share content through a proprietary network. Using the PSN's underlying architecture, *LittleBigPlanet* serves as a social networking service through which players interact with one another to learn more about producing in-game content, form working relationships and friendships, share both material assets and working knowledge, and even collaboratively build game levels and characters. To use Rude's (2009) description of the importance of digital work that mediates communication, the content that players produce in the *LBP* ecosystem serves as "agents of knowledge making, action, and change" (p. 176). Thus, as this dissertation will show, *LBP* is a critical research site for exploring the construction of the social web. Social web spaces emerge through the intersection of people's creative and social practices, the design of the technologies they use, and the processes that those tools seek to implement.

1.2 THE SOCIAL WEB

To explore the design and implementation of the *LittleBigPlanet* experience, this dissertation conceptualizes the *social web* as a digital space defined by the creative and social practices of the people who work within it. This space emerges from the ways in which these practices intersect with sociotechnical ecosystems that consist of groups and organizations, technologies and the processes they enact, and the information that is produced by people and distributed through those technologies. Gillespie (2007) argues that technological designs "anticipate and choreograph the actions of their users, building in roles for users to play and paths for them to follow" (p. 80). This is certainly a common approach within many design methodologies, one criticized by numerous scholars and industry practitioners (cf. Hart-Davidson, 2001; Kolko, 2011; Norman, 2006; Potts 2009c & 2010; Spinuzzi, 2003 & 2009). But, as the examples in this dissertation show, technology users often move beyond intended, prescribed pathways and roles to forge their own methods. In doing so, they produce meaningful experiences relevant to themselves and the cultural groups in which they work. For designers and researchers working within the social web, understanding these cultures better anticipate and support knowledge work that is mediated through digital technologies.

This dissertation is premised upon the argument that the social web does not exist without the people who produce it—namely, the everyday people who write textual updates, post pictures, capture videos, play games, and otherwise produce content distributed through digital networks. Discussing networks as

enacted social phenomena, Law (1992) states that networks may be formed from materials, but only after the "organizing and ordering" of such materials. In the social web, the underlying digital infrastructure may exist in the form of digital services and networks, along with the policies and processes they are designed to support. But such systems are primarily just that—systems for sharing information. People—and just as importantly, the communities and cultures they form—must make use of these systems by producing content and establishing meaningful contexts in which experiences emerge. In doing so, people re-construct these tools to fit their individual and cultural needs. Design and use do not always strictly align to produce seamless, consistent experiences for all participants. Participants in social web spaces can re-purpose digital tools to suit cultural contexts and produce knowledge that is relevant to specific communities. In doing so, they may use digital content and technologies in ways that designers do not anticipate.

For this reason, the social web is theorized in this dissertation as an enacted space that emerges as people, cultures, and organizations mediate their interactions with one another through digital technologies. For the people, groups, and organizations that leverage such spaces for communication, their experiences producing such meaning are tied to the ways they can enact cultural expectations through the technologies at their disposal. For example, sharing certain types of content, such as static images or screencasted videos, can enable knowledge work that supports learning. Those who participate in these spaces will structure the relationships among themselves and the technologies

they encounter to better support their purposes and needs. People will link systems together, re-purpose content, create new content on their own, and forge connections necessary to carry out their activities or meet their participatory goals.

To study the design of social web tools, researchers and designers must study more than the ways in which people work with specific digital tools (Potts, 2008, 2009b, & 2009c). Because the social web only emerges once relationships are enacted through technologies, two important moves must be made by researchers and designers of social web experiences. First, the creative, social, and knowledge work practices of individuals and collaborative groups must be situated within the cultures that provide meaningful context to such efforts. The importance of these activities and practices can only be understood through a stronger approach to the cultures that drive people's activities. This means that the people within such cultures must be understood as participants who help produce knowledge and meaning rather than as simple consumers of cultural artifacts. Second, scholars and designers must also explore social web spaces as ecosystems of technologies, people, organizations, and processes rather than as a series of individual systems and users. People's practices extend beyond individual systems such as Facebook or Twitter to forge connections that otherwise may not have existed beforehand. People link tools and data together. In doing so, they form the social web across digital landscapes of technologies, media, and information.

1.2.1 From Users To Participants

The social web demands that researchers and designers reframe their approaches to the people that work and play there. They are no longer simply users of digital products. People actively participate in the construction of the social web through their social and creative activity. They produce texts and media, forge relationships amongst themselves and with the technologies they use, create and calibrate social and cultural practices, and, thus, collectively produce meaningful experiences from these ecosystems. It is common within the technology industries to refer to those who use software and applications as *users* of such tools. Within technical communication research, Johnson (1997 & 1998) has described users as an "involved audience" that produces content and helps set the direction of interactions between people in digital contexts (1997, p. 363). However, within user-centered design, Norman (2006) has argued that by referring to people as *users*, technologists depersonalize them through a language that degrades their worth as agents interacting with digital tools. He argues that the term *user* takes designers "away from our primary mission: to help people" (p. 49). This term removes the dignity of individuals who leverage digital tools in their day-to-day lives. The implicit meaning of the term *user*, then, is of someone who can only make use of what is given to them. In this case, users may only rely on the technologies in the ways that those tools were designed. However, the social web begs us to re-evaluate how we describe such individuals and conceive of their activities.

People are *participants*.[2] Whereas the term *user* suggests that the individual is subordinated to the functionality of a system, participants work with one another to foster knowledge work through their digital tools. Technologies, then, serve to support the social web as a cultural space—or more accurately, as a multitude of cultural spaces. For academic researchers and industry experts alike, it is important to explore the ways in which participants work with one another within distributed social groups and collectives to produce and share digitized information. These groups of people are mediated through digital tools and networks that can and should support collaborative participatory activities. However, digital technologies and processes gain significance only insofar as their design and implementation intersects with culturally situated individual and social practices.

Thus, participants are critical sociotechnical actors. Their efforts create not only vast amounts of content that can be shared via digital networks, but also help produce, sustain, and even re-invent these networks through their activities. People working within social web spaces do not simply use social networking services and other tools. They participate in the construction of these spaces, defining the purpose and utility of such technologies while doing so. Participants also engage with one another in widely varying ways, some of which are explored and analyzed in the case studies presented in this dissertation.

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[2] *Participation* is discussed in far more detail in chapter 2. Here, the primary point is to put forward the argument that researchers and designers must start looking at people who co-construct the social web as more than users. The term *participant* implies a role in the production of digital spaces rather than just limiting them to consumers of digital content.

We can, then, describe *participation* by exploring how participants perform such practices through digital technologies, and by analyzing how these practices give rise to meaningful experiences for those involved. In doing so, we can open up the design of technologies and networks to a richer analysis of culturally-situated practices. That is, instead of studying individual users working with applications, researchers and designers can focus on participants that are active within ecosystems of people, organizations, processes, and information. The digital networks that link these ecosystem actors together help form a critical infrastructure through which participatory activity is mediated. By extension, this infrastructure mediates the cultural contexts within which meaningful experiences emerge. Knowledge of the ways in which cultural practice and technology intersect is vital to designing better systems that can adapt to cultural use.

1.2.2 From Applications to Ecosystems

The social web supporting the *LittleBigPlanet* experience is not tied to specific technologies, but to cultural practices that leverage a wide range of technologies to produce meaningful communication. Players produce and share digital gaming content. And the case studies in this dissertation illustrate, they also collaborate to share video, static images, and text-based discussions through a wide range of digital platforms and systems. More importantly, their reasons for doing so often shape how they go about their social and creative practices, shaping the social web spaces they produce along the way.

LittleBigPlanet players, as well as the game's developer and publisher, enlist other spaces outside of the Playstation Network into a wide range of participatory activities. For this reason, such spaces should be approached as ecosystems of people and technologies that are assembled into ever-changing configurations. As Taylor (2007) states, "computer games are not simply the packaged products that come off the shelf...but [are] artifacts that traverse multiple communities of practice" (p. 333). Any game can be situated within many different communities and cultures. With games that leverage internet-based networks, these communities will also traverse a wide range of technologies. Some players will produce and share game levels using the game software, while others only play such levels and perhaps comment on them. These communities will leverage many different digital applications and web-based services to support their participation. Participants in the *LittleBigPlanet* ecosystem commonly post videos of the levels they create to YouTube and then link those videos over to their Facebook accounts. They take screencaptures similar to Figure 1.2 shown below, posting them to discussion forums, some of which are owned and moderated by Media Molecule while others are fan-produced and maintained, outside of Sony's or Media Molecule's direct control or influence. Media Molecule will promote player-generated content by finding interesting examples from these channels and highlighting them in their official website, discussion forums, or other social networking services.

Figure 1.2. An example of digital content that participants create within *LittleBigPlanet* and then share across different websites, forums, and blogs.

The ecosystem that has emerged around *LittleBigPlanet* is a dynamic assemblage of people, technologies, and practices. Such an ecosystem is a "range of actors (system, technologies, player, body, community, company, legal structures, etc.) concepts, practices, and relations that make up the play moment" (Taylor, 2007, p. 332). For Taylor, the moment of play must be situated within this complex ecosystem where a multitude of forces come together to co-construct meaningful contexts for players. In this dissertation, this concept extends beyond the "moment of play" outward to the participatory activity of those participants working well-beyond the gaming software. The experience of

playing *LittleBigPlanet* is a social one, mediated by many different digital technologies and services. By tracing participatory practices across these ecosystems, researchers and designers can better understand how different technologies affect or are affected by the activities of ecosystem participants.

1.3 OVERVIEW OF DISSERTATION

This dissertation presents a research methodology outlined through three interrelated case studies. As Chapter 2 describes in much fuller detail, this methodology leverages recent approaches from technical communication, research into participatory cultures from fan and media scholars in cultural studies, and theories from user experience design. The methodology used within this dissertation is, then, interdisciplinary, pulling concepts from multiple fields to produce a framework that can explore the ways that participatory cultures intersect with digital technologies. In doing so, this dissertation explores the *user experience of participation*, or the ways that social and creative practices combine with web-based tools and services to support or hinder participation. The user experience of participation can help scholars and designers trace the intersection between technological design and cultural practice. Armed with such knowledge, researchers and designers can work to produce digital experiences that better support participation across ecosystems of people, groups, and digital tools.

The three case studies at the core of this dissertation trace the user experience of participation by exploring several different configurations of the

ecosystem that supports participation within the *LittleBigPlanet* community. The first case study in Chapter 3 examines the creative and social practices of participants who leverage copyrighted content in their work, producing levels and costumes that recreate popular characters or stories. However, instead of pursuing the legality of these practices, the first case study explores their importance to a specific community by examining the ways that participants use such copyrighted to content to learn and extend their skills. These instances of practice are always embedded within systems that are governed by a mixture of policies and processes. The case study situates the policies that govern digital participation as a matter of design, integral to the experiences of participants within the social web. They contribute to the user experience of participation by outlining the boundaries of participatory practice. These policies do not always clearly support or disapprove of such re-purposing of existing content governed by copyright law. Thus, tracing the intersection between practice and policy within this chapter is a matter of illuminating the ways that participation occurs versus the way that it is constructed and constrained by policy.

The second case study in Chapter 4 explores the procedures and tools implemented by Sony and Media Molecule to regulate participatory practices within *LittleBigPlanet* and parts of the surrounding ecosystem. By looking at the digital reporting system and the process for moderating player-created content, the case study examines the ways that policies are technologically implemented and represented to other participants in the ecosystem. To do so, Chapter 4 maps the policies discussed in Chapter 3 to the moderation process. The link

between cultural practice, governing policy, and technological design is a key consideration for researchers and designers of digital experiences in the social web. By mapping the implementation of governing policies through technical design, the case study examines the ways that moderation is mediated through systems and processes. In other words, how does the interface and the processes that it supports represent moderation policies to participants. The chapter argues that the implementation of such policies can significantly alter the social and creative roles of participants, often without clearly indicating why or how.

The final case study in Chapter 5 examines the coordinative practices of participants who respond to the moderation process by re-configuring connections within the ecosystem. These participants leverage social web tools to track and assemble information from across the ecosystem, coordinating their activities to produce knowledge of policies and practices. In the process, participants seek to better understand the boundaries of their knowledge work, and even change where those boundaries are located or how they are enforced. In doing so, these participants argue for a shift in their user experience of participation, further empowering themselves as owners of their digital experiences. The user experience of participation is presented throughout this dissertation, then, as a dynamically shifting definition of participants' roles within the ecosystem. Participants negotiate the ways they perform and coordinate their creative and social activities among each other, with Sony and Media Molecule, and through the technologies available within the ecosystem. A key component

of this negotiation is by restructuring relationships among people and technologies within the ecosystem. Chapter 5 traces ways in which participants perform such work.

For the conclusion in Chapter 6, this dissertation outlines a series of considerations that must be considered in the exploration of digital infrastructures that support experiences within the social web. This chapter highlights insights from the case studies to outline core concepts to the user experience of participation. The purpose is to establish a richer approach to research and design that situates people who help produce social web architectures as participants within an ecosystem. These concepts can be applied to the research of participatory cultures and their use of technologies in order to develop actionable design insights that support their social and creative practice. Theory can be transformed into applicable knowledge. In turn, this knowledge can be realized as actionable methods for deriving information about the audiences that use social web technologies. Such knowledge will better support the design decisions of both researchers and industry practitioners who seek to provide digital tools to online participants.

CHAPTER 2

A METHOD FOR TRACING THE USER EXPERIENCE OF PARTICIPATION

2.1 INTRODUCTION

In this chapter, I combine research methods from technical communication

and cultural studies to establish a methodology for tracing what I term the *user*

experience of participation. More specifically, I leverage cultural studies research

of fan *participation* and the use of actor network theory in technical

communication scholarship. Each of these two fields provides critical elements

for a methodology that can explore the ways in which technological design

intersects with culturally situated participatory practices in the social web.

The methodology described in this chapter locates the user experience of

participation within the culturally situated practices of people and groups who

collaboratively create digital content, share information, and produce knowledge

through social web tools. A person's user experience is deeply tied to the ways

they produce knowledge and meaning with others through websites and digital

applications. These practices are enacted and mediated through social web tools

that support written text, digital images, video sharing, and even the production of

digital games. By focusing on the user experience of participation, scholarly

researchers and industry practitioners can explore networks in the social web as

ecosystems[3] of information, people, groups, and digital tools.

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[3] In Chapter 1, I described *ecosystem* as the interconnected relationships that exist between individual people and their participatory practices, groups and organizations, policies and processes, and digital technologies. By tracing ecosystems rather than technologies, we can

In the second edition of his book *Thoughts on Interaction Design* (2011), well-known designer Jon Kolko states that user experience experts should "stop being advocates for simply usable designs and begin to herald the creation of more poetic, culturally rich design solutions" (p. 17). Kolko argues that user experience (UX) is in need of moving beyond improving the ease with which people can use the interfaces of digital applications. Designers must also explore the ways that people use digital systems within specific cultural contexts to better understand how meaningful experiences are formed with and mediated through technology. Scholarly research by Potts (2009c & 2010) into social web-based communication also calls for a deeper cultural understanding of social web participants. Social web applications should support the ways in which people work with one another to produce useful and culturally situated experiences. Scholars and designers need a richer approach to research and design, one that views the individual as a connected cultural participant who works with other people and groups to produce and share content with specific collaborative and cultural goals in mind. Identifying those goals and the ways that people organize with one another through social web tools allows us trace the ways that these tools support or hinder cultural participation.

The concept of *participation* as described within scholarly approaches to fan and participatory communities provides a useful framework for understanding the human actors and the collective assemblages they form. Leaning heavily on Henry Jenkins's work tracing the intellectual and creative practices of digital fan

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locate people's practices within collaborative, meaningful activities and better learn to design for and support culturally rich experiences.

communities, researchers rooted in cultural and media studies describe people as contributors that collaboratively produce context and meaning through digital social ecosystems (Green & Jenkins, 2009; Jenkins, 2006; Postigo, 2007). Using social web[4] tools, participants produce and share content through complex cultural interactions that are mediated through digital systems. Flowing through these systems, this activity also intersects with the ways that these tools are designed, maintained, and administered by their owners—primarily media and technology companies working to promote brands and technologies as viable products that generate revenue for their owners. Thus, the experiences that participants encounter are always located in the intersection between their culturally situated practices and the design and administration of the tools they use. The user experience of participation requires researchers and designers to more thoroughly integrate an approach to cultural practice as a critical tool for exploring and designing social web ecosystems.

Technical communication scholars are uniquely suited to exploring and defining the user experience of participation. Researchers within the field have expanded the concept of writing to include collaborative work within digital spaces, exploring the link between production and technological design. Discussed in more detail in the next section of this chapter, technical communicators work to situate this production and collaboration within the cultural contexts of the people who use digital tools (Hart-Davidson et al., 2008).

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[4] The concept of the *social web* is introduced more thoroughly in Chapter 1. The social web is a space that emerges as social connections are enacted through digital tools that mediate communication and different types of digital content. These spaces allow participants to produce and share content as they co-construct meaningful contexts across ecosystems of technologies, people, organizations and groups, and creative and organizational practices.

This dissertation more specifically relies on the important emergence of actor network theory (ANT) within technical communication as a valuable methodology for exploring the ways that people and technologies assemble to collect data, generate information, and collaboratively develop knowledge (Potts, 2009c & 2010; Potts & Jones, 2011; Spinuzzi, 2008; Swarts, 2010). This research draws upon ANT as it is articulated primarily through the work of science and technology studies scholars Bruno Latour, Michel Callon, John Law, and AnneMarie Mol. Within their foundational work, ANT theorizes social interactions by describing the ways that people and technologies form networks to collectively accomplish tasks or forge meaningful experiences. Within ANT, the appearance and function of such networks can be traced through the mechanisms that provide structure to the connections between people and technologies within the network. For technical communicators, ANT has proven an extremely valuable methodology for tracing such behavior through social web tools and collaborative writing practices. I rely on ANT as it is described in Potts (2009c & 2010) and Spinuzzi (2008) to examine the ways that networks and participatory practices structure each other within social web ecosystems. My methodology traces the creative and social practices of participants, exploring the linkages they produce within digital systems spread across multiple online spaces.

Combined, research on digital participation and ANT-based methods for tracing collaborative networks can support the innovative exploration and documentation of digital culture. Exploring how participants situate their network

roles as actors within the social web ecosystems where they produce and share content is critical for developing a richer approach to UX. A richer understanding of the cultures that use social web applications can help improve the UX of those applications. Researchers and designers must move beyond designing for individuals using a single interface. We need to explore collaborative spaces and participatory activities through a methodology that situates people's individual practices within culturally meaningful activities.

2.2 TECHNICAL COMMUNICATION AND MEDIATED EXPERIENCES

In recent years, the field of technical communication has deeply integrated UX research—and earlier, human-computer interaction research—into its approaches to digitally mediated writing. In his 2001 essay "On Writing, Technical Communication, and Information Technology: The Core Competencies of Technical Communication," Hart-Davidson argues that technical communicators are well suited to "managing the massive amounts of unstructured data" (p. 146) at work in content management systems. He relies on technical communicators' uniquely rhetorical approach to both technology and the communication that is mediated through digital systems. Viewing the construction and management of texts through digital systems as a form of rhetoric, Hart-Davidson argues that a view of language as an "iterative" and "inexhaustible" combination of signs prepares technical communicators well for working with technology. In other words, the construction of meaning is a

collaborative experience between people, always situated within the cultural contexts that inform their creative and interpretive practices.

Technical communicators view textual production as a dynamic and iterative process through which meaning is contingent on culturally situated experiences. Technical communication research is easily adaptable to managing fragmented and repurpose-able content in digital systems, as well as designing the ways this content is architected and presented to users. Drawing from their experiences consulting on two major projects, Hart-Davidson et. al. (2007) discuss the design and use of content management systems (CMSs) "as a means to guide decision making about the creation of knowledge, the arrangement of information, the selection of tools, and the design of work practices associated with the making of texts" (p. 10). They approach the design of two major digital systems and their underlying architectures as culturally situated tools and processes that mediate information between different users. Moreover, they emphasize the importance of viewing content management as more than a software system that parses and distributes information stored on a database. Instead, content management needs to be understood as a set of practices, some of which are performed by systems while others are performed by people or organizations. In other words, adopting content management practices "touches nearly everything about the culture of writing in an organization" (p. 12). The presentation of data on a website is a performance that represents a set of practices implemented behind-the-scenes. Thus, designing

content management in collaborative spaces can be a matter of redesigning nearly every aspect of an organization's production and curation of knowledge.

Geisler et. al. (2001) argue that content in digital systems moves "across space and time…as writers make meaning in and from texts in local circumstances" (p. 280). In their view, the digital production and distribution of written content on the internet requires a unique approach from technical communicators to make sense of how and why these practices produce meaningful contexts for people. In their discussion of web-based texts, Geisler et. al. (2001) situate these texts as sites of social production. They argue that "we need to understand users as active" producers of meaning and knowledge in digital ecosystems that are "designed in accordance with the notion that a text is an ongoing, negotiated process, a use rather than a reception" (p. 279). Geisler et. al. stress that texts, and therefore cultural meaning, are produced by users of digital systems.

More importantly, the emphasis on user-generated content in these systems is what makes them such a powerful and culturally significant shift in the production of cultural knowledge. The ability to interact with digital content allows users to become participants in the production of culture and meaning. In their work examining networked writing in digital systems, Haas, Carr, and Takayoshi (2011) point out writers in such systems "do not distribute their texts to readers but rather co-create the discourse with them, so the distinction between writers and readers becomes blurred" (p. 278). Distinctions between writers and readers are blurred because digital technologies more explicitly expose their mutual and

complementary efforts to construct knowledge through textual production. Because this production happens in shared digital spaces, such as social networking services or instant messaging, the textual discourses between participants may be captured and then published or archived. This happens in the form of web pages, comment streams, activity and update streams, or textual transcripts that can be automatically generated by the digital systems mediating communication. For this reason, exploring this writing or other participatory activity is inherently a matter of tracing the culturally situated social and productive practices of participants who work within the social web.

Often, tracing such activity is a matter of tracing movement. Suchman (1994) states that "we constraint and direct our actions according to the significance that we assign to particular contexts. How we do that is the outstanding problem" (p. 47). Her point is that contexts are actively constructed by those involved in the moment of communication, using the tools that mediate their discursive exchange. In his book *Datacloud: Toward a New theory of Online Work* (2005), Johson-Eilola argues that digitally mediated communication takes place within a "deconstructed architecture." Such architectures let users "prioritize the fluid movement of information" so that they can "disorder information, and push it around in streams, letting it stand temporarily in pools to see what develops" (p. 71). In this way, the digitization of content production and distribution supports meaning as an emergent experience that forms when participants interact with information in these pools. By moving that information around, and by also moving "around within that information space," participants

can contextualize and recontextualize information in order to produce new meaning and knowledge (p. 71). Information needs to be mobile across the digital ecosystem (Potts, 2009c), while participants need to traverse the ecosystem in order to gather and coordinate information. Thus, digitally mediated experiences depend upon the movement of both information and people, relying on participants' cultural activities in order to forge useful and meaningful knowledge.

Geisler (2011) states that within recent digital spaces and the communicative practices that these spaces host, there is a clear shift toward asynchronous use of such technologies. She argues that there is "a pattern of asynchronous reuse" in digitally mediated communication on the web "in which one writer's text moves far from its creation to unanticipated contexts for its use" (p. 253). This movement occurs across both time and space, and is critical for participatory communities using social web tools to produce meaningful contexts (Potts & Jones, 2011). For this reason, researchers and designers must explore the ways that participants move within the social web from one digital space to another, and the ways they move information from one space to another in order to link data and information together to support knowledge work.

Technical communicators are, then, well suited to explore the creative practices of people working via social web technologies and the cultures within which they take participate. Much of the field views communication as a culturally situated social practice that intersects with the design of the tools that facilitate these practices. For this reason, technical communicators have taken a strong

interest in the use of social media within work spaces, professional development, pedagogy and classrooms, and numerous other communicative contexts.

2.2.1 Technical Communication Research on Social Media

Technical communication scholars have examined the use of social media for internet communication in several ways. Their work has explored the use of social networking services for work-based communication, professional development, and distributed knowledge work. Twitter has proven a useful tool for sustaining online community and "backchannel" communication (McNely, 2009). McNely's research explores the ways that Twitter participants use the service during conferences to support extended communication about panels and presentations, even well after conferences and symposiums have concluded. His work traces the ways that Twitter-based discourse moves across people and communities, spreading discourse and data to that participants use to produce knowledge or drive further discourse (2010). Other scholars also examine the use of social web tools such as Twitter and Delicious for intra-organizational communication in work environments (Stolley, 2009; Zhao & Rosson, 2009). In their work researching the use of social tagging services within organizations, Panke and Geiser (2009) post that "information tends to be scattered across organizational boundaries in a variety of files, formats, and systems—often with the sole commonality being digital" (p. 322). The research of these scholars explores the ways that information organization and distribution is coordinated in a bottom-up approach. In other words, participants within organizational contexts

use digital tools to socially coordinate the ways that information is gathered, tagged and annotated, and then curated. By tracing this social activity, these researchers situate their work within the cultural spaces that help participants co-construct meaningful contexts for their digitally mediated communication.

Further research by Potts (2008, 2009a, 2009b, 2009c) traces the ways that social web participants use services such as Twitter, Facebook, and Flickr to respond to major disasters. Rather than working within well-established organizational boundaries that help provide meaningful context, these examples explore moments when strangers leverage the social tools to track and assemble disparate bits of information scattered across the web. Potts (2009c) points out that these participants "forage for information and then assemble that information in an ad hoc, but still coordinated, manner" as they are "actively moving among sites" to gather and share information (p. 284). As Potts states, tracing this movement is critical to understanding the ways in which these practices intersect with the design of digital technologies and spaces through which participants work.

Spinuzzi (2009) explains that engaging texts and communities through the social web:

> involves sharing original content such as text, music, images, and videos; meta-information for organizing original content, such as bookmarks and notifications of online activities (e.g., what content you have posted, what music you have listened to, and what applications you have used); and location and status information. (p. 253)

Social web participants share a wide array of signs, symbols, and media through digital systems. In doing so, they often move this data across multiple systems and spaces. A crucial component of the work that happens here is the mobility of that content as it spreads from one system to the next, from participant to participant. These participants rely on the capacity to push data and information through the network in ways that participants deem to be effective and important (Jones & Potts, 2010; Potts & Jones, 2011). Coordinating both activities and the information that is generated through these activities is an important component of the user experience of participation that is traced throughout the case studies in this dissertation. By situating these activities within the cultures in which participants are active, researchers and designers can better understand how these practices encourage meaningful interactions between participants.

The use of social web tools embeds writing and communication practices within complex social spaces that are marked by at least two characteristics:

1) The ability to reassemble, reuse, and repurpose content (Swarts, 2007, 2009, & 2010);

2) The need for people and groups in networks to negotiate and coordinate their activities in some way (Spinuzzi, 2008 & 2009; Potts, 2009c & 2010).

The mobility of content and the ability to fragment content are crucial capabilities for participants in the *LBP* ecosystem. Participants are situated in different places, often interacting with digital spaces asynchronously. Thus,

networks require "dense interconnections" so that activity is diffused across multiple sites of practice (Spinuzzi, 2008, p. 137). Much of the social and creative practice of participants in such networks is "coordinative, polycontextual, crossdisciplinary work that splices together divergent work activities" (p. 266). The diffusion of people and content across time and space requires the capacity to also work across these two dimensions. This means that both information and people must be able to traverse the digital ecosystems in which they operate.

Participants can create digital content—game levels, text, video, or images—and then slice that content into more and more discrete chunks. In doing so, they can then move these discrete chunks across the digital spaces in which they work, often transforming that content to take on new qualities or meaning (Potts, 2009c). This mobility and fragmentation allow participants to repurpose information in order to share it with others. The combination of network diffusion with such mobility and fragmentation means that participatory cultures can easily leverage the "expertise [of] a variety of individuals who must coordinate their efforts" (Slattery, 2007, p. 312). In doing so, participants prompt discussions and social interactions that synthesize information into a deeper knowledge of their participatory skills, collective interests, and culturally meaningful experiences. Discussing the ways that different mobile interfaces affect knowledge work, Swarts (2007) states that such mobility and fragmentation require participants to recontextualize and re-articulate digital artifacts to produce meaning (p. 302). As chapters 4 and 5 in this dissertation emphasize, participants learn and expand their participatory skills in this way, performing

knowledge work that strengthens their connections to the *LBP* ecosystem

(including one another) and that enriches their creative abilities.

Potts' (2008, 2009a, 2009b, 2009c) research points out the material

ramifications of designing social tools that support participatory practices, as well.

Her work examines the participatory use of digital tools to organize information

and produce useful knowledge in the wake of major disasters. This research

tackles two major design problems associated with social web ecosystems and

their ability to support critical knowledge work. One problem she discusses

highlights what happens when digital information becomes proprietary, owned

and maintained by government agencies or news organizations, such as CNN. In

the wake of Hurricane Katrina, CNN relied on lists of missing persons that were

locked away from participatory use. Potts (2009c) demonstrates that social web

participants could neither add new information nor easily extract information that

could have helped people more easily reunite victims with family members.

Through numerous cases, she argues that too often proprietary approaches to

information "fail to create flexible, open systems" that could leverage the often

efficient collective knowledge work of social web participants (2009c, pp. 281-

283).

A second problem highlighted in Potts' research is the critical lack of

understanding by researchers and designers in the design of social tools that do

support such knowledge work. Even in spaces where information is not managed

proprietarily, these participants often face the need to manage multiple streams

of information through systems and interfaces that do not account for cultural use

(Potts, 2009a). Participants add multiple, different tags to their own content in tools such as Flickr. Thus, across many different participatory communities working in the social web, there is a growing need for smart, contextually-aware systems that better adapt to cultural use (Potts & Jones, 2011).

The fragmented and mobile quality of digital information allows such participation to occur more readily. Recent technical communication research points out that social web participants search for pieces of information and media that they then carve and reassemble into fragments that they find useful. Fernheimer, Litteria, and Hendler (2011) argue that digital texts within the web are "platforms for Web-scale transdisciplinary collaborations that encourage both knowledge production and circulation" (p. 323). These texts are tools that can be fragmented and leveraged by participants with different skillsets to collaborative produce knowledge relevant to them and the communities in which they work. These participants can push these fragments across multiple communication networks in order to form new knowledge. As Chapter 3 and Chapter 5 in this dissertation discuss, these practices are critical elements of participation in the *LittleBigPlanet* ecosystem. Participants in digital ecosystems prioritize the "movement, connection, and selection" of information across networks and digital tools (Johnson-Eilola, 2005, p. 110). *LBP* participants reformat and repurpose digital content in order to develop their creative skills and to trace the ways participation is governed by Sony and Media Molecule.

It is this need to trace and understand how these ecosystems are governed or regulated that is so crucial to the user experience of participation.

The policies and processes that media companies use to govern these ecosystems establish boundaries for participation that can limit the ways in which participants organize information and construct knowledge. Gillespie (2007) argues that digital systems now "hide their inner workings from their own users" so that they are "fortified against committed inquiry" (p. 236). The design and processes that implement such policies within the *LBP* ecosystem often stand in stark contrast to the socio-cultural activities of *LittleBigPlanet* participants. However, as the case studies in this dissertation illustrate, the boundaries these policies and processes enforce are not always clear until participants run afoul of them and suffer the consequences for doing so. In their research of an online collaborative mapping tool, Diehl, Grabill, Hart-Davidson, and Iyer (2008) examine the ways that the rhetoric of social web tools represent and distribute information to participants who use them. They conclude that such networks should more explicitly foreground the knowledge work of network actors so that participants can better contextualize the information mediated by the social web. As this dissertation will illustrate, such transparency is not always apparent in such digital ecosystems. The user experience of participation often lacks transparency in the governance of these ecosystems as the interpretation and implementation of regulations by corporations can be at least partially masked by the design of both processes and digital technologies.

Exploring games as collaborative social spaces for participatory work, Sherlock (2008) discusses distributed work in order to explore information networks that support player activities for massively multiplayer-online games.

The distribution of work across networks requires conventions that regulate labor and activity, making coordination possible. According to Sherlock, regulations for contributing to the social spaces around these games, such as terms of service or licensing agreements, are enforced from a number of positions, most notably by the game's developer and by certain players who adopt moderator roles within the larger participatory culture that surrounds the game. As the audience becomes more and more active in the production of texts, their collaborations point to issues of power negotiation not just within the vertical structure of an organizational hierarchy, but horizontally amongst each other so that working and playing peers begin to, in Spinuzzi's (2007) phrase, "monitor each other" (p. 270). Player-imposed regulations make "the rules for participation in the community" extremely clear as some players assume positions of power over others in order to better coordinate and distribute information needed by the rest of the community (Sherlock, 2008, pp. 275-276).

This research highlights the ways social web tools are utilized to perform information management and knowledge work in complex sociotechnical networks. These networks connect people, organizations and groups, technologies, processes, and policies within the social web, interlinking them across time and space. Moreover, these networks are asymmetrical in that their technical infrastructure is often owned or maintained by numerous media and software companies. For example, many of the platforms traced in this dissertation, such as the Sony Playstation Network (PSN), are proprietary systems owned by Sony and Media Molecule. Users enter into these systems for

the purpose of producing and sharing digital content with one another, but they do so through these proprietary systems. These users, their practices, and the content that they produce are always interconnected with these media companies and the ways that such organizations govern their systems. For this reason, media companies such as Sony and Media Molecule can exercise significant control over these systems. In doing so, they can unilaterally force many of the relationships within the network to change.

2.3 DEFINING PARTICIPATION

Jenkins (2004 & 2006) describes *participation* as a "cultural logic" in which people interacting with media—particularly through digital, web-based systems— shift from operating simply as passive consumers to working as active contributors in the construction of texts and meaning. In his work, Jenkins explores the relationships that form among fans as they interact with cultural texts and brands that they find meaningful or important. Researching groups of fans that form around popular films or books, for example, Jenkins argues that participation transforms the consumption of these cultural objects into a "social rather than individualizing practice" (2006, p. 218). By leveraging digital tools that support the production of content and information sharing, participants can engage with intellectual properties (IP) such as books or television programs through community-based interactions. Participants socially interlink themselves through social web tools in order to forge meaningful experiences.

The user-led production of content and innovation of creative practices within these ecosystems is now a "significant cultural and economic phenomena influencing and in part explaining the production of culture worldwide" (Banks & Deuze, 2009, p. 420; see also Deuze, 2007a & 2007b). Social web tools facilitate this production of content and culture, empowering digital participants to create new content, repurpose existing digital content, and share their work with one another.

But scholars are also quick to point out that participation is not a utopian empowerment that lifts audiences out of the consumer doldrums by simply handing them their own powerful tools of production and distribution. For instance, Donath and boyd's (2004) early survey of social networking platforms explores communities within systems such as Friendster and MySpace. Their research showcases participatory activity that the owners of such platforms did not expect and often responded to rather harshly. Fans form complex relationships with the media industries by using both the IPs and the network infrastructures that companies such as Sony develop and maintain:

> Sometimes, these two forces [fans and industry] reinforce each other, creating closer, more rewarding, relations between media producers and consumers. Sometimes, these two forces are at war…Media producers are responding to these newly empowered consumers in contradictory ways, sometimes encouraging change, sometimes resisting what they see as renegade behavior. (Jenkins, 2004, p. 37)

Participation interconnects consumers with the media industries so that elements of the production, distribution, and marketing of cultural texts and information is distributed through networks that enable consumers to more actively assert their preferences. Participation is not a liberation of fans and other consumers from the market, but it does give participants some ability to impact both production and the value of what is produced. Thus, fans, such as the player-creators of *LBP* and *LBP 2*, are always operating within complex relationships with the culture industries. In ecosystems such as *LBP*, fans are always interlinked with the media industries, using software, production assets, and social web tools that are owned and maintained by these companies. These relationships are a critical part of the user experience of participation that fans encounter within social web ecosystems. Such relationships can impact participatory activities, including the ways that people produce and share digital content to collaboratively develop meaning and knowledge.

2.3.1 Participation as Co-creation

In this dissertation, participation can be explored as "co-creation," or a process in which companies such as Sony and Media Molecule leverage user-generated content as a resource for producing value for the companies (Prahalad & Ramaswamy, 2000 & 2004). Fans create videos of their experiences, produce fan art, and discuss the game in forums, blogs, and other spaces. For many fans, then, these interactions are complex social and cultural activities,

mediating collaborative work to produce new and relevant knowledge to their communities.

In addition, through these social interactions, participants raise awareness of the games among gaming audiences in online participatory cultures. The social and creative practices of these cultures can become highly successful ways of marketing digital products. Bridging the cultural logic of participation and the logic of market economies is the core of co-creation. Participation can also generate economic value, in turn producing revenue for media companies and technology services. For many contemporary cultural studies, media studies, and games studies scholars, co-creation is a complex topic raising many questions about the potential for exploiting participants as cheap or even free sources of labor (Banks & Deuze, 2009; Ip, 2008; Kucklich, 2005; Terranova, 2000 & 2004). While consumers are now active, their activity is also productive and valuable.

Thus, the user experience of participation often illustrates a tension between culturally situated knowledge work and the ways in which companies such as Sony and Media Molecule maintain the value of their IPs and systems. The examples discussed in this dissertation outline the complexities of such tensions, tracing the ways participation is defined and redefined through the activities of both participants and media companies. A critical approach to participation allows UX designers and researchers to better recognize these tensions. As will be discussed in more detail below, technical communication research has become increasingly well suited to merging UX design methods with research into culturally situated communication and knowledge work.

According to Sotamaa (2010), Sony couples co-creative activities of *LBP*

participants with "Play. Create. Share" in order to reinforce a marketing narrative

of the *LBP* ecosystem as a player-friendly space. The narrative of these

marketing campaigns states that the participant's imagination is the only

limitation to what he can produce and share. The *LBP* ecosystem is one example

in which participation is used by media industries to extend an IP as a valuable

brand (Arviddson, 2005; Sotamaa, 2007 & 2010). Content produced by

participants appears in television, print, and internet advertising as a way of

promoting the games as well as Sony's hardware and social web infrastructure,

the PS3 and PSN. Benkler (2006) notes that the technologies and networks that

support these practices "bring [the] rich diversity of social life smack into the

middle of our economy and our productive lives" (p. 53). Participants produce

content and share it through numerous social media channels. In doing so, they

also perpetuate the awareness of the original intellectual property—in this case,

the games *LittleBigPlanet* and *LittleBigPlanet 2*. The cultural and sociotechnical

practices of participation can also drive the value of these IPs and industry-

maintained network infrastructures. Participatory activities are, then, mediated

through networks and digital systems that often enable companies to position

participation as a value proposition. Because of its place as a value proposition,

then, these companies often regulate participatory activities in such a way that

they believe to increase value.

Many scholars argue that co-creation research must recognize that the

relationships between player-creators and the gaming industry are much more

intricate and dynamic. They point out that many fans may be "shamelessly exploited" as free sources of creativity and labor (Terranova, 2006, p. 216). Fans will generate new ideas and use their skills to bring them to life, usually with no financial compensation from the companies who reap the monetary benefits of such dedication. Yet, these fans are also often well aware of their value to the gaming industry in these ecosystems, and they embrace their network roles for a myriad of complex reasons (Deuze, 2007a & 2007b; Jenkins, 2004 & 2006; Postigo, 2008). In some cases, fans are focused on simply being able to produce and share content in some form. In other cases, they may derive cultural status among their online counterparts if Sony or Media Molecule singles out their creative work for promotion. In this latter case, many participants see such singling out as a form of special recognition of an individual's creative skill. From this view, researchers can approach co-creation as a "co-evolution" of "economic and cultural factors" situated in a "dynamic open relationship" (Banks & Potts, 2010, p. 260). There is recognition by participants and media companies that player-generated content is both a valuable cultural expression as well as a valuable market commodity. For this reason, Banks and Deuze (2009) argue in favor of a more carefully balanced assessment of co-creation as neither ideally democratized creative relationships, nor as top-down forms of labor exploitation. Instead, participants and media industries are always explicitly defining participation through their creative practices, the ways that they seek to expand or limit those practices, and the ways participation is supported through the design of social web tools.

Participation is a dynamic interplay of interests, purposes, and skills. Participants negotiate network roles with one another and with the media companies that own and maintain the IPs and the digital infrastructures through which participation takes place. Using social web tools such as forums, the PSN, or Facebook, participants collectively produce their own content, gather information with and from one another, and produce knowledge. The ecosystems that they form mediate their cultural practices as they share content and interact with one another.

Examining the user experience of participation is a matter of exploring three interrelated factors. The first factor is how and why participants pursue knowledge work within their cultures—their motives for their social and creative practices, as well as the ways in which they perform their work. Researchers must situate participants' activities within the digital cultures that provide meaningful context for their work. The second factor is the ways in which network actors define participation through their activities, their regulations, and their processes. Scholars and designers must describe how participants' activities intersect with the actions and policies of media corporations and the workflow of the digital spaces and processes that mediate their activity. The third factor, then, is the design of digital technologies. Exploring such ecosystems requires rich descriptions of interactive features within these technologies, including the ways participants use those features to perform their activities. Describing these three factors will support a more holistic view of these ecosystems. Taken together, they provide a strong understanding of culture, activity, and technology. In

addition, such an approach can help both researchers and designers better explore the points at which these three factors intersect. Doing so will provide a better understanding of both participatory communities and the technologies they leverage. In turn, scholars and industry practitioners can better support participatory knowledge work that is mediated through social web technologies.

2.4 TRACING MOVEMENT WITH ACTOR NETWORK THEORY

The methodology in this research leverages actor network theory (ANT) in order to trace the movement of people and information and the ways that co-creative practices are embedded within participatory cultures. Based on Potts's (2008, 2009c, & 2010) work using ANT to trace disaster communication across the social web, the methods outlined in this section trace coordinative activity across digital ecosystems to describe the user experience of participation. I do so by focusing on the ways that network participants mediate their activities through social web technologies, moving across digital space to find information and then moving that information to construct meaningful contexts. ANT provides a strong set of tools for theorizing these social and productive practices. As Potts (2010) states, mapping "the people, places, organizations, events, and technologies can empower design teams to know their audience's context, relationships, and distribution" (p. 305). This is critical to better exploring the ways that participatory practices within digital cultures intersect with technological design. Because of this holistic view of networks, ANT privileges neither people nor technologies.

Instead, ANT scholars encourage an approach to networks that focuses on the enacted social practices of both people and technologies.

If the social web is the product of these social practices and their intersection with digital technologies, then ANT provides a strong set of tools for describing the user experience of participation that is central to this dissertation. A key ANT concept is the notion of the actor, or any person, organization, or technology within the network. According to Callon (1999), "ANT...assumes the *radical indeterminacy* of the actor," leading to "no stable theory" of it (p. 181, Callon's emphasis). Actors include any person, organization, tool or object, place, event, or process that plays any part in a functional network. Instead, actors can be described by "the way in which actors are defined, associated and simultaneously obliged to remain faithful to their alliances" (Callon, 1986, p. 19). The term can be applied to any human or non-human entity because the description focuses on what they do rather than what they are. In this way, ANT avoids essentialist descriptions of actors, relying instead on the contingencies within which networks form as a basis for describing the people, organizations, and technologies that assemble together. Actors are not defined by their essential qualities, but by the their actions, connections, and purposes within the network. They are both human and non-human components that can organize into more stable networks in order to perform tasks or pursue goals (Latour, 1987). ANT focuses on the ways that individuals, organizations, events, and tools and other actors gather into *assemblages*, or a series of relationships. Assemblages are tactical and contingent collections of actors that are gathered

around a common purpose or set of purposes (Latour, 1999a & 2005). When the assemblage organizes into a structured set of connections to perform a task, an actor network is formed.

The networks that I explore in this dissertation's case studies are not stable organizations. To borrow Law and Mol's (2003) terminology, these networks are fluid sets of alliances through which individuals and organizations act to achieve their goals or respond to some kind of need (see also Callon, 1986). For a methodology rooted in ANT, people can not be viewed as simply interacting with the application they have open in front of them on their computer or their video game console. Instead, participants engage at different times and in different ways with a wide array of people, groups, and technologies in order to accomplish important goals and produce meaning with one another. Their activities and the information they use are dispersed across digital spaces. That information moves through different actors throughout the ecosystem as participants organize content and their activities to form new knowledge.

The movement of participants and information discussed earlier, so important to the user experience of participation traced throughout this chapter, requires actors to organize their activities across the ecosystem. In these networks, participants must explicitly coordinate their tasks with one another, across the digital systems, and through multiple tools and practices. Spinuzzi states that ANT "is interested in how *power* works", tracing the ways in which workers communicating across digital systems maneuver for strong rhetorical positions and coordinate their efforts to perform tasks (p. 32; cf. Callon, 1986). In

doing so, actors add structure to a loose assemblage, forming networks to accomplish tasks as necessary. As the assembled actors perform their tasks, they reconfigure their relationships on an ad hoc basis, becoming "more intricate…and incorporating more groups, disciplines, fields, and trades as well as more technologies, regulations, legislation, and customers" (p. 198). Actors have the capacity to inject new elements into the network in order to perform their actions. These new elements may include other people, technologies, or groups that strengthen an actor's capabilities within the assemblage. In this way, they form "dense interconnections" that support "multiple, multidirectional information flows" (p. 137). Within these dense interconnections, participants must negotiate their roles with one another and with the systems and processes that support their activities. By describing these interconnections and the coordinative activities of the actors in the network, scholars can better trace the ways that culturally situated creative and social practices intersect with the design of technologies in the social web. Armed with this knowledge, researchers and designers can create tools and systems that support participatory knowledge work that is so important to these online cultures.

For Latour (1999b), networks are "the *summing up* of interactions through various kinds of devices, inscriptions, forms and formulae, into a very local, very practical, very tiny locus" (p. 17; emphasis in original). This means that meaningful experiences emerge from the connections within these networks, or the ways that linkages support an understanding of local contexts. In other words, the individual actor's—including digital participants—experience of the network is

directly connected to the ways their network relationships mediate their perceptions of these contexts. Creating rich descriptions of the relationships between network actors enables researchers and designers to develop a stronger understanding of how such mediation occurs. In turn, researchers can better explore the ways that digital technologies intersect with cultural contexts, as well as the importance of individual participatory practices within those cultures. When a participant posts a comment to a discussion forum, that person is forging a connection between his or her own work, other participants in the forum, the technologies on which the forum runs, and those who maintain the forum as a viable tool. Thus, how these participants work with one another is constructed through the relationships that form around both human and technological actors and the activities that they support. While identifying the individual actors within a network is an important component of ANT-based research, another crucial element is exploring the mechanics of their relationships to one another through the traces of their activity. This can be done by tracing the ways that linkages among actors are formed, the ways that information and people move within the ecosystem, and how this movement helps participants co-construct meaningful contexts for producing culturally relevant knowledge.

Because of its emphasis on relationships among actors, ANT situates agency as a network effect that emerges from the ways that actors—both human and non-human—relate to one another in order to accomplish a task or specific set of goals. The individual and the network co-construct each other. The

network forms as individual actors assemble, but the act of gathering and the connections within the network shape the actor, as well. Latour (1999a) uses the example of flying to illustrate the interdependency that actors have with one another: "Flying is a property of the whole association of entities that includes airports, and planes, launch pads and ticket counters. B-52s do not fly, the US Air Force flies" (p. 182). In this example, Latour argues that flight cannot take place without a carefully choreographed series of connections among people, work groups, training, equipment, and processes that support the task of getting a plane into the air. Describing actors within an assemblage is more a matter of discerning the roles they perform in relation to one another, rather than identifying essential qualities of each individual actor. The emphasis is on sociotechnical relationships and how they are formed among network actors, as well as the function that these relationships perform for carrying out the network's purpose.

2.4.1 Mapping the Topology of Participation

In this dissertation's case studies, I map the topology of these networks within the *LBP* ecosystem. To do so, I use ANT to trace the actor networks that emerge around specific processes and practices, outlining the connections between actors and the way they perform their activities within the ecosystem. Potts's (2009c & 2010) method for tracing actor networks provides a strong foundation for exploring relationships among participants and the mechanisms through which participants form these relationships. Potts describes the actor

network maps in her work as "mapping the available actors" within an ecosystem (2009c, p. 286). This allows researchers to pinpoint the specific connections that emerge between people, technologies, organizations, and processes within these ecosystems. Each case study traces relationships among actors in order to visualize connections among people, groups and organizations, and technologies. This facilitates a stronger understanding of actors' roles within these networks. Within the *LittleBigPlanet* (*LBP*) ecosystem, researchers and designers can identify how individual participants within online communities connect to one another, how technologies mediate their activities, and the ways in which they interact with Sony and Media Molecule. This method enables researchers and designers to develop a more holistic view of the network, its purpose, and the relationships that emerge there.

Such a description can help us better understand how people work with one another through digital technologies to produce meaningful interactions and experiences. The technologies themselves are crucial mediating factors within the actor network. As Latour states in a 2008 lecture, "Design lends itself to interpretation; it is made to be interpreted in the language of signs" (p. 4). Part of the coordinative activity that participants must perform is understanding how technologies mediate their interactions with one another, as well as the information they produce and share. Describing the relational mechanics among actors helps scholars and industry practitioners create better methods for exploring the social web as an ecosystem in which people and technologies co-construct the user experience of participation.

The knowledge work that is performed within participatory communities and the relationships that support such work co-construct each other through processes in which the actor network's purpose is defined, negotiated, and sometimes redefined. The user experience of participation describes the ways in which these processes take place and how participants and media companies situate themselves and each other as network actors through these processes. Better understanding how such processes emerge and are how they are implemented can help researchers and UX designers focused on social web ecosystems to design systems that are suited to adapting to cultural situated participatory practices.

The process for mapping actor networks that Potts describes involves three stages. First is mapping the potential actors at work within a media ecosystem by coding them as noun-types, including people, groups, technologies, systems (multiple technologies assembled together), events, and so forth. Second, is the need to create a visually "unique stencil" that makes each actor easily "recognizable" (Potts, 2010, p. 306). The third and final stage involves an analysis that determines the types of connections among actors within the network and visualizing by changing the weight and types of lines shown in Figure 2.1. According to Potts, this method visually maps "shifts in practice" according to the "strength of ties, length of time, history of use," or another analytic represented by the lines of connection among actors (p. 307). The goal is identify the relevant actors, assign a visual language to them within the map, and to then explore the connections among them within the network.

Figure 2.1. Example actor network diagram, based on Potts (2009c & 2010).
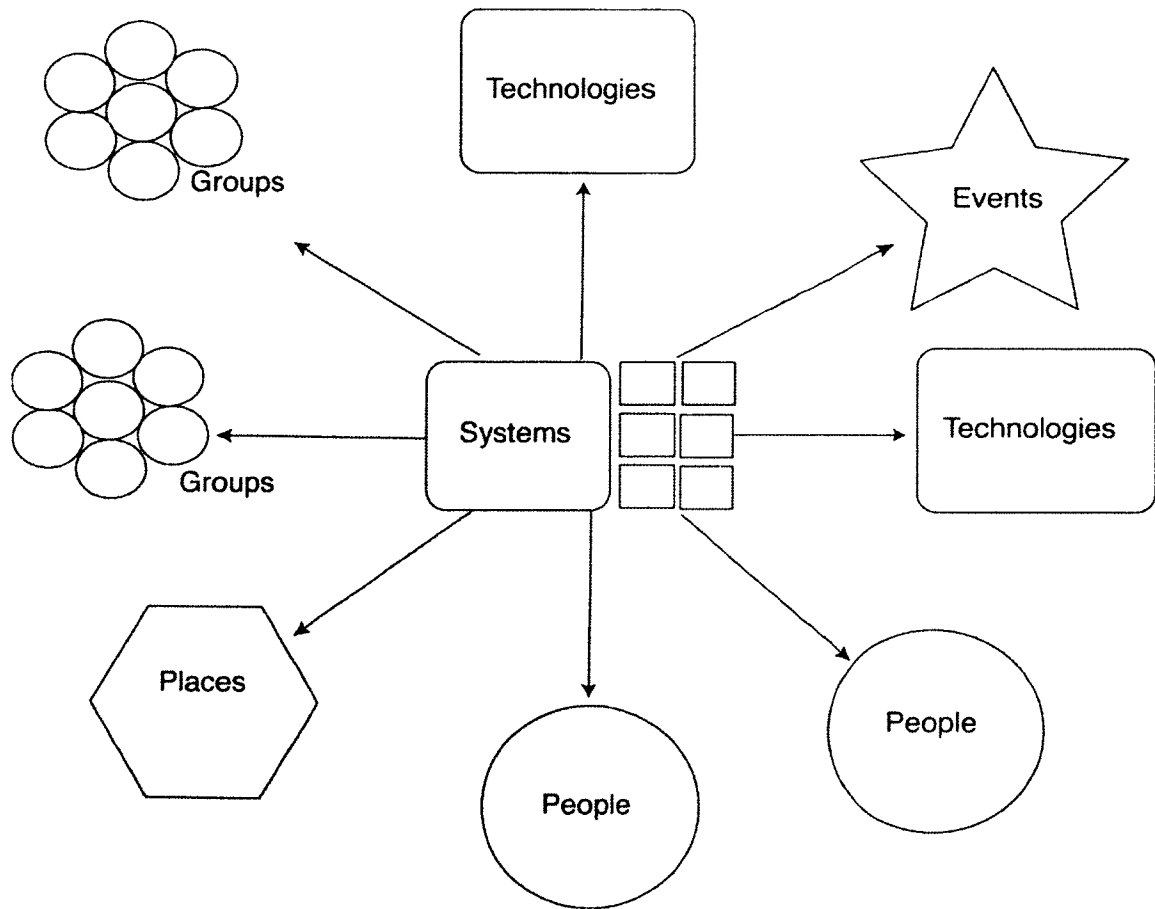
In this example map, Potts includes individual people and groups, specific geographic locations and events, and individual technologies and larger integrated systems to showcase the ways that one actor mediates connections among the others. For instance, the information flowing from a specific location may move through a specific digital system before a group or agency may discover it. Thus, the pertinent question becomes "how did this movement through the system transform that information before the group ever found it?" Just as important, the system may mediate that information differently for the

group than it might for another individual person. The system may be accessed in different ways from different corners of the network, thus causing the information to be transformed differently as it is dispersed across the network.

For researchers, this type of mapping provides a clearer overall understanding of the actors at work within a social web ecosystem. It also provides the foundation for identifying not only how they are linked, but the processes such links support and why those connections are so culturally important. Looking at the crisscrossing patterns of connections within an ANT diagram helps researchers and designers better explore the ways technologies mediate social and creative activity. Before we as scholars and designers ever dissect a community's use of technologies in specific instances or the ways that technologies mediate cultural activity, we can map the connections within the network. This allows researchers to contextualize the ways that actors transform information, activities, or even the entire assemblage's purposes, providing richer descriptive context for understanding both network-level and individual participatory practices.

The case studies in the following chapters explore the way that these relationships structure participatory activities. As Latour (1999a) states, "there is no way to define an actor but through its action, and there is no other way to define an action but by asking what other actors are modified, transformed, perturbed, or created by the character that is the focus of attention" (p. 122). This statement suggests that researchers and designers can leverage what we learn about actors' activities as one way of describing how and why they transform

through their work and linkages within the network. Though it may be tempting to read this as a deterministic construction of the user experience of participation, this is not the case. Actors—both human and non-human— are not simply fated to be tossed about in an ever-shifting set of social practices. Instead, as this dissertation shows, their work is often highly directed towards specific purposes, requiring negotiation over their network roles and their capabilities as actors. Their position within the network makes this negotiation a necessity. Describing the mechanics of such relationships is crucial to understanding how, and more importantly why, participation occurs within the network. The user experience of participation discussed throughout this dissertation depends upon describing these mechanics.

2.5 DESCRIBING THE NETWORK MECHANICS OF THE ECOSYSTEM

The method for this dissertation adapts Potts's ANT-based mapping by leveraging several other ANT concepts in order to describe the relational mechanics among actors and the ways in which those relationships impact participatory practices. These mechanics can be used to describe the ways that relationships between actors are enacted. In Potts's method described above, the focus is on outlining the specific actors and their connections to one another within the network. The research in this dissertation extends this work by qualitatively describing the relationships among actors, identifying the mechanisms through which actors forge connections. Richer descriptions of

these mechanics will allow researchers and designers to describe the structure of the actor networks during specific moments.

Table 2.1 outlines the ways that these mechanics are described throughout this dissertation. My method is designed as an "integrated" approach (Spinuzzi, 2003) that attempts to reveal a fuller picture of how network participants configure their relationships to each other and perform work within those assemblages. Using this rubric, it is possible to learn how and why movement of participants and information occurs within participatory ecosystems and the roles that social web technologies play within such spaces. More importantly, it is also possible to trace how participants and information may be transformed as a result of this movement. The user experience of participation, then, emerges as a series of narratives outlining the ways in which these mechanics structure networks and the interactions among people, groups, and technologies.

Table 2.1. Concepts from ANT that describe the relational mechanics among actors.

ANT Concept	Definition
Prescription	A prescription can be described as "what a device allows or forbids from the actors—humans and nonhuman—that it anticipates; it is the morality of a setting both negative (what it prescribes) and positive (what it permits)" (Akrich & Latour, 1992, p. 261). Prescriptions often take the form of processes, policies, or other technically implemented rule sets that establish the boundaries of the ways that actors can interact with one another.
Inscription	An inscription is an "archive" of the practices of player-creators and the information they produce (Latour, 1999a). It is useful to think of this "archive" as a collection of data traces that are embedded within an inscription, pointing to the practices, skills, and technologies used to produce that inscription (Akrich & Latour, 1992; Latour, 1999a). According to Potts (2009c), inscriptions can point out the ways information is transformed as it moves across the assemblage of people and technologies in these spaces. Inscriptions are snapshots not just of content, but also of practice, including the ways that participants connect with other network actors.
Obligatory Passage Point	The obligatory passage point is a "double movement" in which a central actor "determine[s] a set of actors and define[s] their identities" (Callon, 1986, p. 6). Passage points are required pathways for information to move throughout the actor network. This means that at least some of the network's activities must involve specific network actors and the relationships that are possible with them.
Black Box	A black box is an "assembly of disorderly and unreliable allies" within a network that are then "slowly turned into something that closely resembles an organized whole" (Latour, 1987, pp. 130-131). In doing so, these individual allies appear to merge into a single actor that can simplify network processes (Spinuzzi, 2008). The black box, then, can both simplify relationships among actors and processes, as well as hide relationships from participants.
Firespace	Law (2003) describes firespace as "the *continuity of shape as an effect of discontinuity*. As with fluid constancy, movement rather than stasis is crucial. Without movement there is no consistency" (p. 7). Within firespace, the relationships among participants support the movement of information. These relationships can also be dissolved and restructured in order to adapt to the needs of participants or other network actors.

Each of these mechanics is used throughout this dissertation to describe

how relationships form among network actors. Shedding light on how these

connections form can also illuminate their cultural significance within these participatory cultures. These mechanics help describe three major elements of the user experience of participation:

- The ways that participatory practices and the content they produce (inscriptions) intersect with the definitions of participation and the regulatory policies (prescriptions) offered by people, groups, and technologies;

- How people and information move through technological channels (obligatory passage points) and potentially veil the functions of some network linkages (black boxes);

- The ways that participants forge new channels to move both themselves and information across the digital ecosystem to support knowledge work and coordinate information.

The cases that Potts traces in her research highlight that many social web technologies are not designed with participants and their contexts in mind. These systems lack a strong understanding of the "local innovations" or "local exigencies" (Spinuzzi, 2003, p. 19) of the people participating in these networks. Instead, proprietary social networking systems tend to be designed in ways that dismiss these local concerns. As Gillespie (2006) notes, digital technologies are more often "designed to limit use" in ways that "frustrate the agency of its users" (p. 653). For this reason, researchers and designers must pay greater attention to the participatory uses of information in the social web and the ways these practices intersect with governing policies, processes, and technologies.

The method used in this dissertation combines ANT-based mapping with descriptions of the relational mechanics that are possible within sociotechnical networks. What emerges is a stronger knowledge of these local circumstances and the cultural contexts that give meaning to participatory activities. This enables researchers and designers to explore the ways in which technological design intersects with cultural practice. We can situate an exploration of the user experience of social web ecosystems within the participatory cultures that digital systems and networks support. By doing so, scholars and industry practitioners can design more contextually aware applications and workflows with participatory activities and culturally important practices in mind.

2.5.1 Data Collection

To collect data for this dissertation, I turned to the traces of participant-generated content found throughout the *LittleBigPlanet* ecosystem. These traces include written text, videos, static images, and in-game levels and characters. Each example is a trace of social and creative activity. Because they are often embedded in social web technologies, the activity that accrues around these traces often indicate how and why such traces become important to these participatory communities.

My research explored forum discussions, official Sony and Media Molecule websites, participant-maintained blogs and websites, comments on player-created game levels, interviews with Media Molecule designers and developers, and customer satisfaction systems. Within these digital spaces, I

was able to locate a wide range of discussion among participants and company representatives centered on the issue of moderating player-produced content. Throughout this dissertation, examples of this data are presented as screencaptures of various discussion threads and posts, including posts of digital images captured from within the games. These discussions focused heavily on the policies that regulate participatory practice and the use of the digital tools. In addition, many of these discussions illustrated the ways in which player-creators in the *LBP* ecosystem use these digital tools to share ideas and coordinate information. As the case studies will show, efforts to track down and coordinate such information occupy much of the knowledge work that occurs within these communities. Participants both improve their social and creative skills through these conversations, as well as learn more about how Sony and Media Molecule govern their proprietary services and systems.

Below, I describe the data collection for each case study within the dissertation.

2.5.1.1 Chapter 3: Prescription and Inscription

This chapter explores the tensions between the participatory practices of *LBP* participants and the regulatory policies put in place by Sony and Media Molecule. More specifically, the case study examines the ways that player-creators use copyrighted intellectual property as a part of their social and creative practice by tracing the ways that they leverage, repurpose, and distribute such content across the ecosystem. For example, searching Media Molecule's

LBP.me site for a raw indication of how commonly participants use copyrighted characters in their work. This site has a search engine to help participants find levels within the game and queue them up so that they can be accessed via the game software later. As Chapter 3 indicates, a raw search of the term "Batman"—a popular comic book and film character—yielded a return of 8,080 hits as of this writing. It is impossible to trace how many player-created levels use such copyrighted content. But, it is a common practice within the *LBP* ecosystem.

Data collection took two forms: scouring the *LBP* ecosystem for traces of participatory activity and tracking down the various policies that regulate such activity and the use of digital tools:

- Searching Media Molecule's discussion forum LittleBigWorkshop.com for examples of player-creators using copyrighted content in their work, the same term "Batman" yields 70 individual discussion threads. The most active thread includes 1570 replies, while the least active included only one. The discussion thread chosen for this case study is dedicated to exploring how to create custom costumes for characters, starting with a post that showcases how to create popular comic book and movie characters. It originates on November 18, 2008, three weeks after the game's initial release. The thread contains 525 responses and is active until August 31, 2010.

- I have also gathered the terms of service and end user licensing agreements that apply to the proprietary systems within the *LBP* ecosystem. These include the agreements that applied to Sony's

Playstation Network, the Playstation 3 game console, and the

LittleBigWorkshop forums, as well as the End User Licensing

Agreement for *LittleBigPlanet* itself. In every case, I have worked with

the most recent versions of these agreements as of Chapter 3's writing.

As software licensing and service agreements, Sony and Media

Molecule do update them at irregular intervals, especially as new

versions of software are released.

- In addition, I use interviews with Media Molecule representatives

  discussing the ways that third-party copyrighted content is used by

  LBP participants.

2.5.1.2 Chapter 4: Black Boxes and Obligatory Passage Points

In Chapter 4, I explore the design of the moderation system within the *LBP*

ecosystem, known as the Good Grief! System. By exploring the design of the

Good Grief! System's interface and workflow alongside the reported experiences

with the system, the case study allows me to identify how the moderation system

combines two qualities. One is the ability to at least partially hide how policies are

interpreted and implemented, while the other is how the system is situated as a

necessary pathway for participants who want to report what they believe is

questionable content.

To do so, the case study leverages ANT mapping to outline the ways that

policies discussed in Chapter 3 are implemented through the design of the Good

Grief! System.

- I evaluate the user interface found within *LittleBigPlanet* for accessing and using the Good Grief! System to report player-created content to moderators. This analysis of the interface situates the interactive features and text against its position within the actor network between participants and moderators. I analyze the ways that the moderation process is represented to player-creators through the Good Grief! System's interface. Using the ANT concepts of the *black box* and the *obligatory passage point* outlined in Table 2.1, the case study outlines how the Good Grief! System can contract the boundaries of participation without clarifying how or why.

- Turning to the fan-maintained and -owned forum LittleBigLand.com, I look for traces of discourse in which participants write about their experiences with this moderation process. There are 28 individual threads discussing moderation in this forum. This discourse highlights the ways that participants perceive the moderation process, as well as their potential confusions surrounding how and why content is moderated. This research catalogs various examples in which forum participants outline their experiences when their content is reported and moderated.

- Searching the keyword "moderation" on Media Molecule's GetSatisfaction.com board reveals 96 individual discussion threads as of this writing. I randomly survey example posts from participants discussing what happened to them when their content was moderated.

Participants use such forums as places to seek answers from other community members, including Sony and Media Molecule representatives, as to how and why the moderation system works the way that it does.

2.5.1.3 Chapter 5: Fire Space

In the final case study in Chapter 5, I examine the ways that *LBP* participants can link information together across the ecosystem. In doing so, they help one another coordinate information in order to learn more about the moderation process described in Chapter 4. In this case, the coordinative activities of participants seek to better outline the moderation process, why moderation occurs, and offer ideas to Sony and Media Molecule about how it might be changed. This chapter argues that by using tools such as discussion forums, participants can restructure the actor network of moderation. They turn it into a *firespace*, or a space that facilitates movement of people and information across a digital ecosystem (Law & Mol, 2001).

The forum GetSatisfaction.com—first discussed in Chapter 4—serves as a key research site for this case study. To gather data for this case study, I looked at ways participants link information back to GetSatisfaction.com by posting hyperlinks within forum threads.

- I survey 260 of the 2624 discussion threads in GetSatisfaction.com that were active as of this writing to discover how often participants embed hyperlinks to other external systems and services, such as

Twitter or YouTube. Of the threads I examined, 19% of them contained such links.

- I have also collected 30 threads with instances in LittleBigWorkshop.com—another discussion board maintained by Media Molecule—in which participants and Media Molecule representatives pointed participants back to GetSatisfaction.com for discussion on moderation or other problems.

2.6 CONCLUSION

Each case study in this dissertation leverages the concepts from Table 2.1 to explore the mechanics of the relationships among actors within the *LBP* ecosystem. More specifically, these tools describe the mechanisms that help structure the actor networks that emerge around the moderation process within that ecosystem. The narrative of each case study, then, provides a rich description of the movement of participants and information, the importance of such movement for the cultures working with the ecosystem, and the ways that movement is structured and restructured to support different actors' goals and needs.

First, *prescription* and *inscription* describe the ways that creative practices of participants intersect with policies aimed at governing participatory activity within the *LBP* ecosystem, including the use of copyrighted material in player-generated content. Second, I describe the ways that technological design works to reinforce these policies by combining the qualities of an *obligatory passage*

point and a *black box*. These mechanisms strengthen the authority of Sony and Media Molecule moderators who exercise discretion in determining what can be produced and shared in the ecosystem and what should not be shared. In other words, these moderators work to control movement of both people and content, thereby controlling information. However, the players who produce and share content are not simply rendered powerless. The third narrative in this dissertation then describes the ways that participants restructure connections in the ecosystem by injecting other network actors to produce a *firespace* that supports movement of information. In doing so, these participants find ways to negotiate their roles within the moderation process and exercise their own control over how their content moves and why.

These narratives provide a richer understanding of participatory practices within the social web that occur within the assemblage of people, technologies, and practices that are present in the *LBP* ecosystem. Each narratives explores the ways that these practices intersect with technological design in order to outline the user experience of participation. By constructing such narratives, researchers and designers can better understand the ways participation occurs within the ecosystem and the participatory cultures situated within. Such knowledge is critical to any research or design methodology that seeks to account for the user experience of participation. Researchers and designers must work towards an understanding of these ecosystems rather than the relationships of individuals and individual technologies or interfaces. In doing so,

we can explore the ways that participants leverage different social web tools in

ad hoc ways to communicate and produce knowledge.

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CHAPTER 3

PRESCRIPTIONS AND INSCRIPTIONS IN THE USER EXPERIENCE OF PARTICIPATION

3.1 INTRODUCTION

In this chapter, I identify contradictions in the user experience of digital participation.[5] Despite multiple policies that state, "do not create, transfer, share, send, submit, post or upload" any copyrighted content (Sony, 2011), participants are producing large amounts of content that violate these restrictions. According to the developer of *LittleBigPlanet* and *LittleBigPlanet 2* (*LBP*), there are more than four million player-produced game levels across the *LBP*[6] ecosystem (Media Molecule, 2011). Recreating stories and characters from popular books, films, and other video games is a common practice across this community. Using the LBP.me search engine, a site provided by *LBP* developer Media Molecule to find game levels and look at the online profiles of *LBP* players, a simple search for the keyword "Batman" returns over 8,080 hits. However, Media Molecule and Sony rarely pull infringing content from *LBP* servers. In addition to the formal policies and agreements that govern the *LBP* ecology, these companies also maintain informal policies that allow for the use of copyrighted content. These contradictions can be traced among the creative practices of participants, the

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[5] As discussed in Chapter 2, the *user experience of digital participation* refers to the ways tools, technologies, and policies converge within a social web ecosystem to enable or constrain participants as social, active, and productive agents of culture and knowledge.

[6] For the research in this dissertation, the ecosystem for both games is largely identical. Therefore, I will typically refer to both *LittleBigPlanet* and *LittleBigPlanet 2* with the single acronym *LBP*. If I discuss a feature exclusive to one or the other, I will use that game's full name.

policies and licensing agreements that govern participation, and the ways those policies are applied across these spaces.

Using the concepts of *inscription* and *prescription* from actor network theory (ANT), I trace these contradictions as important components of the user experience of participation discussed in Chapter 2. Inscriptions are the traces of network activity left by a network's actors, including participants and Media Molecule, (Latour, 1987 & 1999a). Inscriptions provide a documented trace of the activities of actors[7] within networks, including participants[8], Media Molecule, and Sony. These inscriptions take the form of game levels, characters, and stories that players produce within the game, as well as many other images, videos, and texts that surround this creative work. Prescriptions set the boundaries for what actors can and cannot do in actor networks (Akrich & Latour, 1992). Prescriptions can be traced through both the rules that establish what is and is not acceptable within a community and the limitations and capabilities of technologies that apply those rules. In this chapter, I focus on the policies outlined in various licensing and terms of service agreements that govern *LBP*.[9] Taken together, inscriptions and prescriptions provide a view of these contradictions that can trace possible

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[7] Callon (1999) states that "ANT...assumes the radical indeterminacy of the actor," leading to "no stable theory" of it (p. 181, Callon's emphasis). What constitutes an *actor* in any network is contingent, potentially different from one network to the next. For this reason, actors can be both human and non-human components of any network, including individual people, groups, technologies, physical objects, etc. (Latour, 1999a; Law, 1999).

[8] The term *participant* refers to any person not identified as a representative of Sony or Media Molecule who engages in the *LBP* ecosystem by producing an inscription of some kind: e.g., game levels, comments and ratings added to games or forum discussions, or images, text, and video posted on social networking sites such as Facebook or YouTube.

[9] In this chapter, I am interested in the ways policies try to establish the scope of acceptable participatory practice. I explore the ways prescriptions are implemented within the user experience design of specific technologies in Chapter 4.

tensions between what is created and regulations governing what can or should be created.

Using the case study of NyghtHawk (2008)—a participant who uses the in-game tools in *LittleBigPlanet* to recreate stories and characters from comic books and films—I argue that these contradictions have significant ramifications for the user experience of participation. He distributes his creations as playable levels within the Playstation Network (PSN) and as still images in a discussion forum owned and maintained by Media Molecule, LittleBigWorkshop.com. In doing so, his activities become subject to a complex web of policies that do not seamlessly align with one another or with the way Media Molecule constructs the notion of participation in other spaces. Sony and Media Molecule can also shift the ways prescriptions define his participation without reason or warning by reserving the capability to change the licensing agreements or changing the ways current agreements are enforced. Sony and Media Molecule can alter the user experience of participation at any time, potentially disrupting the creative and social practices of participants such as NyghtHawk and his forum peers.

Spinuzzi and Potts both argue in their research for tools and technologies to be flexible enough that they can adapt to the "local" needs of network participants and communities within their own local contexts (Spinuzzi, 2003). Nyghthawk's case study and the activities it documents point to ways in which these local needs are met through creative adaptations of already existing assets and copyrighted IP. The rules and regulations that govern ecosystems such as *LBP* and their uses have significant ramifications for the ways social web tools

can be designed and implemented to support the local circumstances of participants. For researchers and user experience (UX) designers[10] studying both these cultures and the technologies they use, the relationships between inscriptions and prescriptions is a core component of the user experience of such ecosystems.

3.2 INSCRIBING CREATORS

In an interview with popular video game site IGN.com, Media Molecule executives state that one of the company's primary goals with *LBP* is to empower players to become "the creators" (Robinson, 2008). As players become creators[11], they become active contributors to the *LBP* ecosystem who add content for others to play rather than simply playing content that already exists. In addition, the 2008 release of *LittleBigPlanet* became a major part of Sony's "Play.Create.Share" marketing campaign for the Playstation 3 (PS3) that year (see Sotamaa, 2010). The "Play.Create.Share" campaign highlighted the PS3's capacity to empower its owners as creative participants with games and other digital experiences. Due in part to *LittleBigPlanet's* commercial and critical success, the game's sequel *LittleBigPlanet 2* (Media Molecule, 2011) continues to be one major centerpiece of Sony's ongoing marketing and branding efforts. The marketing campaign's tag line was also used in the *LittleBigPlanet's* manual,

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[10] I will often use the terms *UX designer* and *designer* to refer to user experience designers. In the web design and development industry, a user experience designer often uses multiple skillsets to take on multiple roles within the iterative design process: user research, information architecture, interaction design, usability testing, etc.

[11] After this point, I will refer to these specific participants as *player-creators* for the sake of clarity and brevity.

which describes *LBP* as "a world of infinite possibilities, where imagination becomes reality and the powers of creation are firmly in your hands" (Media Molecule, 2008, p. 4). Media Molecule and Sony market *LBP* to as a platform through which fans and players can produce their own stories, game levels, and characters—content that fans and players can then share with one another through the PSN.

The core interaction for player-creators in the *LBP* ecosystem is using the tools and assets provided within the games to make playable content that they then share publicly in the PSN. Once that content has been published to the PSN, any PS3 owner who has the *LBP* game, a PSN account, and an internet connection can log on to the PSN and access this content. "Play.Create.Share" becomes a key strategy for defining the user experience of participation through a combination of marketing and technological design that not only empowers players as creators but also attempts to define what counts as acceptable creative practices.

Player-creators in the *LBP* ecosystem are generating inscriptions, or an "archive" of the practices of player-creators and the information they produce (Latour, 1999a). It is useful to think of this "archive" as a collection of traces that are embedded within an inscription, pointing to the practices, skills, and technologies used to produce that inscription (Akrich & Latour, 1992; Latour, 1999a). According to Potts (2009c), inscriptions can point out the ways information is transformed as it moves across the assemblage of people and technologies in these spaces. Inscriptions are snapshots not just of content, but

also of practice. By tracing inscriptions, researchers can identify participatory practices in an actor network and trace the technologies that player-creators use to produce content. These inscriptions shed light into the ways participatory cultures use social web technologies as tools for cultural production and knowledge work. Hart-Davidson (2001) argues that textual traces are iterative in that they can be repurposed and reconfigured to meet the needs of different people in different contexts (see also Johnson-Eilola, 2005). Tracing the ways these inscriptions and practices intersect with policies that constrain participation allows researchers and designers to explore the impact such policies have on the user experience of participation in the social web.

As Figure 3.1 shows, the participant NyghtHawk uses *LBP*'s in-game tools to make costumes that recreate popular comic book, television, and video game characters. NyghtHawk makes costumes by modifying his *sackperson*, a digital puppet that serves as the main avatar in *LBP* (Media Molecule, 2008). Media Molecule provides some costumes for the player-creator's sackperson. Player-creators can also modify their sackperson with different colors, textures, and images to produce their own costumes. NyghtHawk then posts screencaptures of his costumes to the LittleBigWorkshop.com forum as a topic of discussion, a common practice in *LBP*.

Figure 3.1. Costumes created by NyghtHawk and uploaded to a forum for others to see.

NyghtHawk uses Sony's and Media Molecule's proprietary technologies to support his practices of reproducing copyrighted IP and sharing it with others. Figure 3.1 is an inscription, or "a sign, an archive, a document, a piece of paper, a trace" that records data about communication practices in an actor network (Latour, 1999a, p. 306). The inscriptions, their technical details (such as file format), and connections to other people and technologies are all a part of this trace. In this case, the NyghtHawk's costumes shown in figure in Figure 3.1 are an inscription that allows us to uncover the process described above so that we can identify some of his practices and the technologies he used. These are local practices that indicate both NyghtHawk's needs and potential usability concerns he faces, such as methods of transforming inscriptions and adapting them for different purposes.

Once he finishes his costumes, NyghtHawk can share them with other participants in different ways. First, he can publish them to the PSN in a game level, providing the different pieces of each costume—hats, shirts, pants, glasses, etc.—so that other player-creators can use them in their own game levels and mimic his designs. Or he can pursue a more cumbersome process shown in Figure 3.2. In this process NyghtHawk screencaptures his costumes created within the game and saves the images locally on his PS3 hard drive as a JPEG[12] image file. The PS3 provides several USB ports so that NyghtHawk can copy those JPEG files to a flashdrive, which will allow him to upload the images to a computer and post them in a discussion forum. In this case, LittleBigWorkshop.com is owned and maintained by Media Molecule. Despite the

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[12] Joint Photograph Experts Group format.

common ownership between *LittleBigPlanet* and LittleBigWorkshop.com, there is

no support for exporting images from within the game directly to NyghtHawk's

account within the forum. Yet, with these technologies and the connections

NyghtHawk forges among them, he can produce and distribute content in

multiple ways, expanding his skills and the actor network in which he can work,

as well.

Figure 3.2. Flow diagram for the steps NyghtHawk uses to produce his inscriptions.

Playstation 3

Sackperson

Costume → Screencapture → JPEG File

LBP Stickers

Copy JPEG

Flashdrive   JPEG File

Copy JPEG

Computer   JPEG File

Upload JPEG

LittleBigWorkshop.com Forum   Forum Post
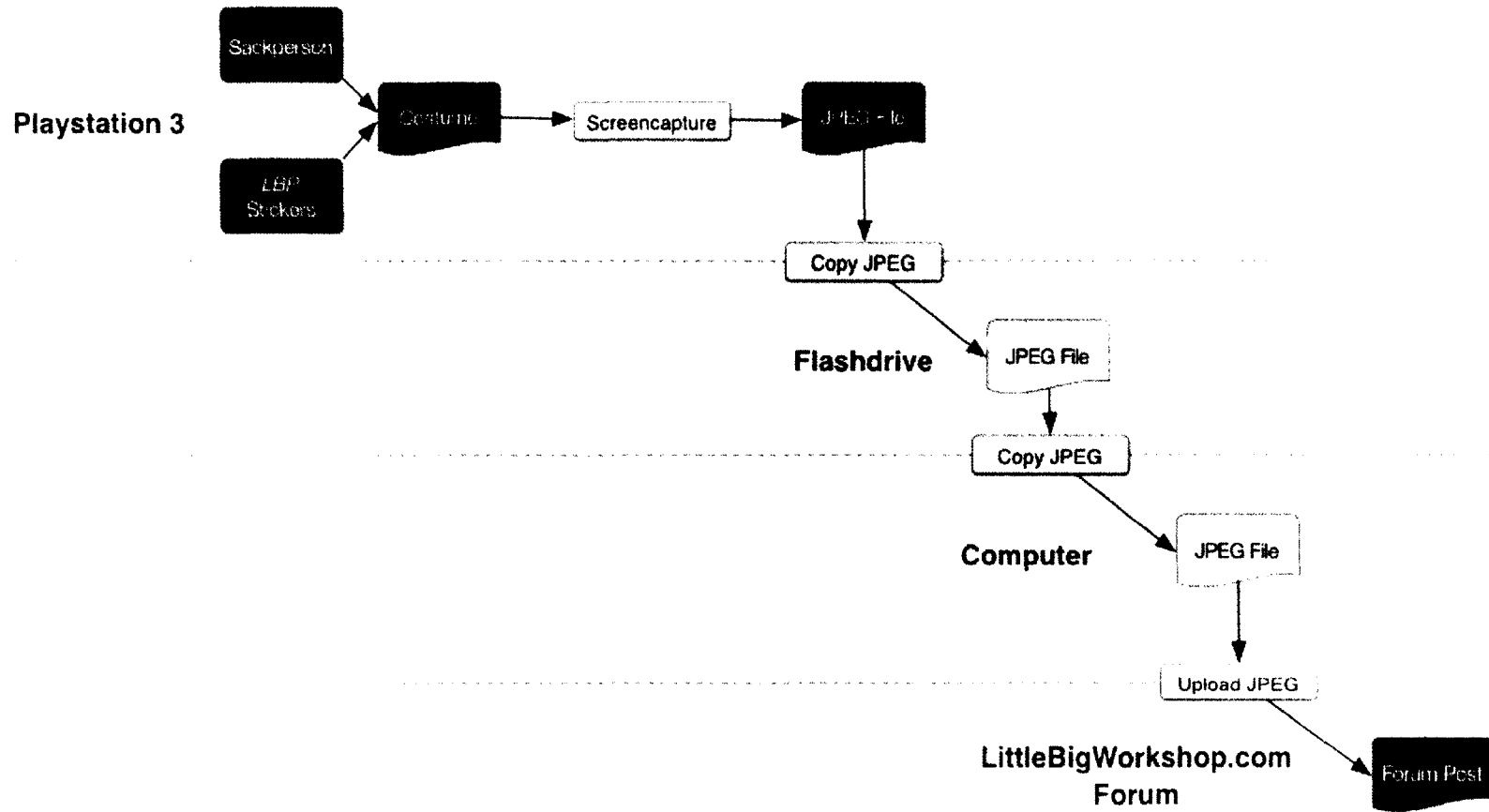
I describe this process as cumbersome because even though the costumes are produced on the PS3 and are lastly uploaded to a forum post on LittleBigWorkshop.com, these two spaces are not directly linked. Thus, there is no way to simply export the image directly from one proprietary space to another. NyghtHawk must enlist other technologies in order to form these linkages, moving his inscriptions across multiple boundaries in doing so. He must first take his inscriptions out of one proprietary space (the PS3), move through spaces outside of Sony's and Media Molecule's control (a flashdrive and a computer), only to reinsert his inscriptions back into a space these two companies do control (the LittleBigWorkshop.com forum). As he does so, the inscriptions he produces document more and more detail about his creative practices and the process for moving his inscriptions from his PS3 to the discussion forum.

Figure 3.2 illustrates how NyghtHawk's costumes are produced and then transformed to create three different inscriptions: the costumes themselves, the JPEG files of the screencaptures, and the forum post where these images serve to support the discussion among participants. Stickers become costumes; costumes become digital images; and digital images support the written discourse between NyghtHawk and other forum participants. To use Latour's (1999a) words, NyghtHawk's activities are a type of "invention" in which he alters the sticker's purpose by situating it within a "series of associations" with other people and technologies (p. 179). In doing so, NyghtHawk not only transforms the ways these costumes are used, but forms new inscriptions by linking

technologies so that he can move his costumes from the PS3 to the discussion forum.

Tracing the inscriptions in a network uncovers many of the creative practices of participants such as NyghtHawk. Understanding these practices is crucial for exploring how those who produce content in the social web construct actor networks through their creative activities within such ecosystems. Understanding how these practices contribute to the participant's knowledge and skills provides a critical picture of the user experience of participation.

3.2.1 Knowledge Work and Copyrighted Content in the Social Web

Nyghthawk's inscriptions—the costumes he creates and the images of them he uses in the forums—become tools for facilitating social interaction among forum participants, a key component of participation in spaces such as *LBP* (Jenkins, 1992, 2004, & 2006). This social interaction is characterized by discussions of the skills and practices that are documented in these inscriptions. For example, in the same discussion thread where he posted the costumes in Figure 3.1, he asks forum participants for feedback about his costumes. He says that he wishes to "inspire people to try out there [sic] skills as well" (NygthHawk, 2008). The discussions documented in the LittleBigWorkshop.com forum thread are examples of *knowledge work*, or "analytical activity requiring problem solving and abstract reasoning" (Diehl, Grabill, Hart-Davidson, & Iyer, 2008, p. 414). This discussion thread becomes a site for exploring skills that player-creators can use to create costumes within the game. Using copyrighted IP provides participants

with a well-known and recognizable point of reference with which to critique the effectiveness of the skills they are discussing. This practice is a critical component of the knowledge work performed by NygthHawk and his peers. Understanding how these policies intersect with local practices is important for researchers and designers who are working with social web communities and technologies.

Spinuzzi (2008) argues that the relationships among network actors "change constantly" so that the "network tends to become more intricate, linking to and incorporating more groups, disciplines, fields, and trades as well as more technologies, regulations, legislation, and customers" (p. 198). The more work there is and the more complex that work becomes, the more intricate and unpredictable the connections among network actors become. Participants can respond flexibly to the intricacies of their local circumstances, especially where connections among people and technologies "may not be stable from one incident to the next" (2007, p. 268). Thus, understanding how to empower participant responses to local exigencies and participant needs in relationship to a larger cultural or political context is a critical element of the research and design of communication networks.

For the *LBP* participants traced in this chapter, using stickers and copyrighted IP can be understood as "unofficial, idiosyncratic, ad hoc solutions" (Spinuzzi, 2003, p. 19) to the problem of learning and using *LittleBigPlanet*'s assets for producing in-game content. By using copyrighted IP as examples in the discussion forum, NyghtHawk, PhadedWun, Grifindor_seekr, and others

leverage their local innovations as crucial tools knowledge work. This knowledge

work is dedicated to learning techniques for participation. In expanding their

knowledge of participatory practices and techniques, these participants are also

tracing the boundaries of participation established by policies that govern these

ecosystems. Researchers and designers must trace the local innovations of

social web participants and account for the ways these practices intersect with

the proprietary rules and regulations companies use to govern social web

ecologies.

In response to NyghtHawk's post about his costumes, one forum

participant states, "I made a Joker, but yours puts mine to shame. How did you

get the red along his mouth so small?" (PhadedWun, 2008). NyghtHawk

responds by stating that "its 2 of the same stickers flipped and overlapped."[13]

This tells PhadedWun how to manipulate a sticker in order to produce the

desired size and effect. By using popular characters such as Batman, Captain

America, and the Joker, NyghtHawk's costumes become points of reference for

participants discussing the techniques, skills, and resources needed for making

intricately detailed costumes. Social interactions that take place among

NyghtHawk and his peers in the forums are critical components of knowledge

work. In this knowledge work, NyghtHawk transforms stickers from an interactive

object of play, to a document that records traces of data, to a tool that presents

information in creative and compelling ways.

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[13] In the *LittleBigPlanet* game manual, Media Molecule describes *stickers* as a "decoration" or a "chosen embellishment" (2008, p. 13). Stickers are digital images of geometric patterns, graphic designs, and textures that can be affixed to the surfaces of in-game objects, including the player's sackperson, in order to alter their appearance.

Other participants in the LittleBigWorkshop.com forum thread then use

NyghtHawk's post to generate discussion of the skills and tools he uses to

produce his inscriptions. In the same forum thread, NyghtHawk and

Grifindor_seekr discuss how to use stickers to make a Batman costume.

Grifindor_seekr asks, "Did you manage to paint the mask all the way around his

head? I'm asking because I tried doing that on my attempt and had no luck."

NyghtHawk responds by stating that he simply created one sticker large enough

to "paint sackboy all black in one shot." Grifindor_seekr follows up by asking how

NyghtHawk can "remove the paint" so that the character's mouth is visible.

Removing "paint" refers to a method for removing sections of a sticker in order to

uncover the sackboy's mouth underneath. NyghtHawk informs Grifindor_seekr

that the technique he used does not remove any "paint," but uses another sticker

to "create the mouth second after painting the whole body." In this exchange, the

visual details (the costume color and mouth) of a popular copyrighted character

become points of reference for discussing how to use *LittleBigPlanet*'s stickers to

produce the desired visual effects.

To return to Latour's (1999a) concept, the "archive" of information about

creative practices and skills is teased out of the inscription to produce knowledge

that is useful for Grifindor-seekr and other participants. NyghtHawk's activities

transform stickers and their use through his own "local innovations" (Spinuzzi,

2003, p. 19) wherein he adapts stickers to recreate copyrighted IP. In

NyghtHawk's example, becoming a player-creator utilizes copyrighted IP to

demonstrate ways of using in-game assets such as stickers. He repurposes the

copyrighted IP that he uses in his costumes, and then he repurposes the costumes as static JPEG images that become examples published within the forum thread. Forum participants then use these JPEG images as tools for developing and exchanging knowledge that expands their creative skills. By expanding knowledge and skillsets, the social interactions of these discussions expand the participatory skills of NyghtHawk, PhadedWun, Grifindor_seekr, and the other participants in the forum discussions. They are empowered to develop a stronger, more detailed understanding of how to use stickers to create costumes.

However, these participants are performing tasks that are not necessarily sanctioned by Sony and Media Molecule due to participants' use of copyrighted IP. As the next section explores more fully, this critical knowledge work is both permitted within the proprietary space of the LittleBigWorkshop.com forum while it is also restricted or even forbidden according to the policies that govern that forum. The user experience of participation in this space situates participants so that their work seems to be simultaneously encouraged and useful but also forbidden.

Media Molecule executive Kareem Ettouney acknowledges the social and cultural importance of participants using copyrighted content in their creations: "It's like hip hop being completely about refactoring, and about classic art refactoring ancient art" (Robinson, 2008). Leveraging already existing material, including copyrighted content, as a source for inscriptions is an important social and cultural practice. In the case study traced in this chapter, copyrighted IP also

proves a useful resource for learning important participatory skills. New

knowledge is generated from already existing content. New creative practices are

learned from the social interactions that form around inscriptions. NyghtHawk's

multiple inscriptions support the knowledge work in the LittleBigWorkshop.com

forum as a critical form of participation in this ecosystem. The forum posts by

NygthHawk, PhadedWun, and Grifindor_seekr about the use of stickers use

these local innovations to learn new skills and explore the boundaries of

participation.

3.2.2 Copyright Owners and Regulators in the *LBP* Ecosystem

Reflecting Media Molecule's understanding that the use of copyrighted IP

is critical for many *LBP* participants, the company also leverages social web tools

in ways very similar to NyghtHawk's case study. In August of 2012, the company

selected a player-created level as an "MM Pick" on the LBP.me website (shown

in Figure 3.3). MM Picks are levels selected by Media Molecule representatives

to be highlighted on this portal. Here, Media Molecule has produced an

inscription that lists and endorses playable content created by other player-

creators. In this case, they are recommending a level that is a *Star Wars*

recreation of a famous scene from the film *A New Hope* (1977) in which the main

characters escape from the Death Star. The level's creator, JulesyJules, tells

players to "Rescue the Princess — you're her only hope!" Her language echoes a

famous phrase from the film, reinforcing the connection between the level she

has produced and the film on which it is based. By listing it in their MM Picks,

Media Molecule has acknowledged the level publicly, acknowledging JulesyJules'

recreation of copyrighted content as a legitimate form of participation in the *LBP*

ecosystem.

Figure 3.3. Media Molecule highlights a player-created level that recreates a famous scene from the film *Star Wars*.
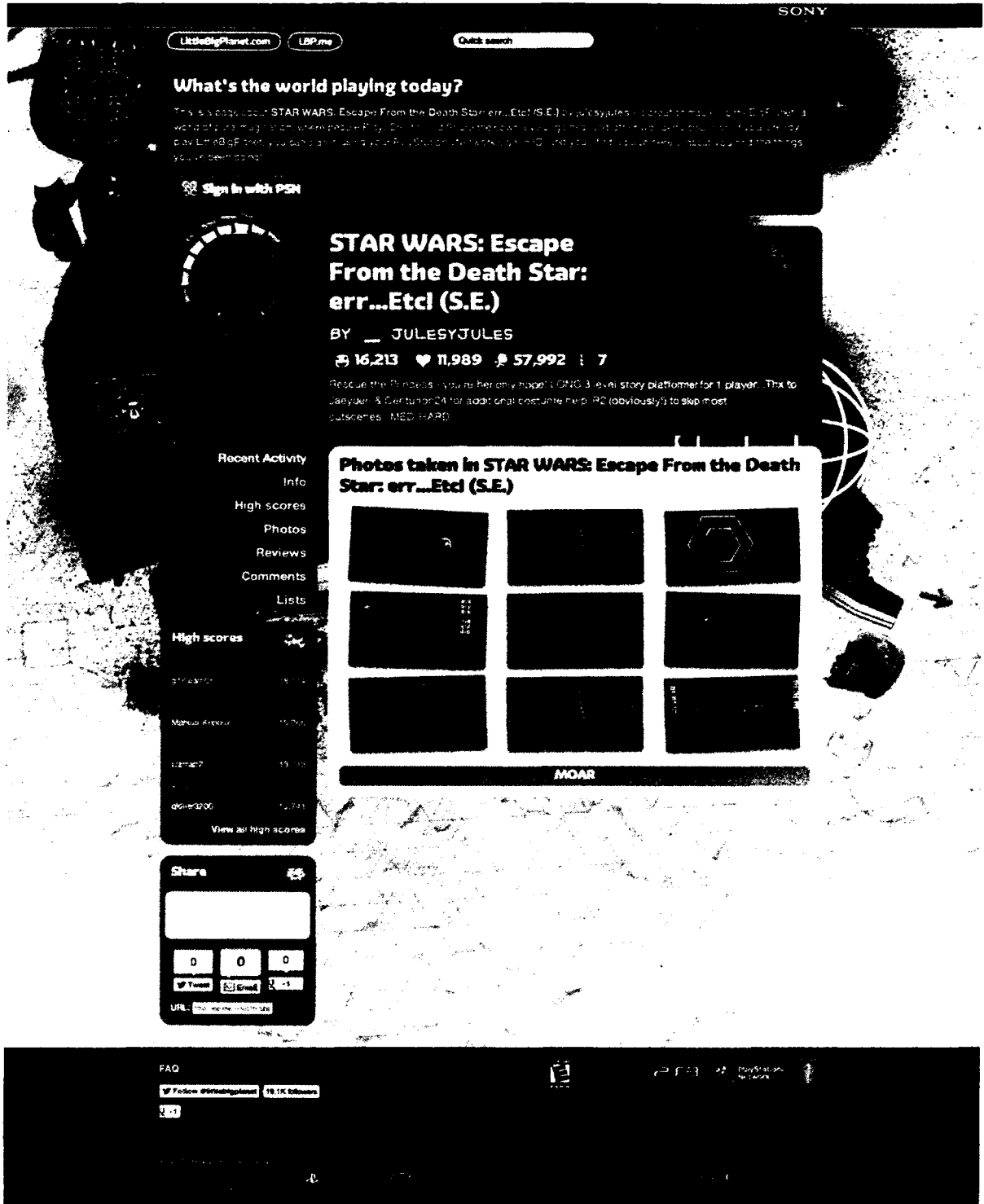
This chapter does not argue that in every case participants should be allowed to break copyright laws. However, in the *LBP* ecosystem, using copyrighted IP as a tool for participation and the knowledge work as described above is an important social, cultural, and technical activity. As well-known points of reference, the use of copyrighted content allows participants to compare player-produced inscriptions with the source materials from which player-creators draw their inspiration. Through these comparisons (discussed in the previous section), NyghtHawk, PhadedWun, and Grifindor_seekr assess the capabilities of in-game tools and judge their own proficiency as player-creators, seeking ways to improve their knowledge and skills. Such knowledge work is a necessary component of the user experience of participation in *LBP*. For researchers and designers, supporting these types of local inventions and the knowledge work those inventions support is critical for our approach to the social web and its communities. We must design systems and tools that empower people as participants. Empowerment does not mean we give participants tools to subvert all legal constraints. Instead, we must understand the user experience of the social web as more than a series of tools for sharing information and data. Policies that define the boundaries of practice for participatory cultures are integral features of the user experience of social web ecosystems. Exploring the importance of copyrighted IP to participants and their communities is critical for us to develop a richer approach to the ways policies affect the user experience of the social web. We can empower participants by understanding the ways that

participatory practice takes shape in the social web and emerges as knowledge work.

The user experience of participation in this ecosystem is shaped through the use of copyrighted material that is inscribed multiple times in different ways across several spaces for various purposes. NyghtHawk's activities use copyrighted IP as a source for multiple inscriptions that he moves from one technology to another, from one system to another, across the *LBP* ecosystem. His activities transport his inscriptions from the PS3 where he produces them, through a transformation into a JPEG image, which is then copied and transferred into the LittleBigWorkshop.com forums. He transforms his inscriptions and their purposes, using the social web tools in the ecosystem to support his creative practices and to empower other players to also become creators. Other player-creators take up NyghtHawk's inscriptions in an effort to learn more about the techniques he uses to produce the costumes he posts publicly. These are local innovations that support the knowledge work that player-creators pursue in order to refine their participatory skills. In this space, researching and designing for the user experience of participation means tracing the ways participants link systems, networks, and copyrighted IP to develop the knowledge that empowers players as creators. These practices and the inscriptions participants produce are always entangled with policies that govern such ecosystems. The same is true in other social web technologies. Tracing inscriptions helps us uncover these important practices and skills, their significance to the participatory cultures who use them, and the ways they intersect with governing policies.

The next section traces the ways inscriptions and the practices they document intersect with the limits to participation that Sony and Media Molecule outline through various policies. These policies, or *prescriptions*, are crucial to both the research and design of systems and networks that support participatory cultures. Because participation often occurs through and within proprietary systems, networks, and technologies, the user experience of participation in these ecosystems is also contingent upon the ways inscriptions are entangled with policies that define the limits of participatory practices. Thus, prescriptions can significantly affect the local innovations and knowledge work of participants such as NyghtHawk. Researching and designing for this entanglement is necessary if technical communicators are to further explore social web ecosystems as useful sites of communication and knowledge work.

3.3 PRESCRIBING PARTICIPATION

As Potts (2010) states, participatory activities in the social web often come "into conflict with various laws and regulations" governing proprietary technologies, copyrighted IP, and the ways participants use both across cultural, legal, and technological borders (p. 303; cf. St. Amant, 2002). Nearly all of NyghtHawk's activities utilize proprietary actors: the *LittleBigPlanet* game, the PSN, the PS3, and the LittleBigWorkshop.com forum.[14] All of these proprietary actors are governed by terms of service and licensing agreements that forbid the use of copyrighted IP. NyghtHawk's creative practices, inscriptions, and

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[14] The term *proprietary actor* refers to any web site, digital technology, network, group, or person that is owned, maintained, or employed by Sony or Media Molecule.

knowledge work are all intertwined with these policies. Because much of his

creative work takes place within proprietary spaces or uses proprietary

technologies, his activities are subject to policies that restrict or forbid these

practices described above. According to these policies, NygthHawk's

reproductions of copyrighted characters—as well as, Media Molecule's

highlighting post of the *Star Wars* level on their own site—violate the rules and

regulations that govern the *LBP* ecology. Thus, NyghtHawk's user experience in

the *LBP* ecosystem is closely tied to the ways these policies intersect with his

local innovations, including the knowledge work he and others perform in the

forum discussions. In our research and design of social web ecosystems, we

must account for the ways these policies can impact local innovations and the

knowledge work of participants seeking to understand and strengthen their skills.

Using ANT, these policies can be understood as *prescriptions*, or "what a

device allows or forbids from the actors" (Akrich & Latour, 1992, p. 261). In the

LBP ecology, prescriptions can be identified in terms of service and licensing

agreements. These are formal policies that participants often must agree to in

order to use proprietary systems, networks, and technologies. These policies

establish the boundaries of participation by asserting which activities are

permissible and which are not. If the participant refuses to agree to such policies,

then he may be denied access to important features of the technologies or to the

spaces those policies regulate. For instance, if a participant does not accept the

End User License Agreement (EULA) that accompanies the game software, then

the game will not connect to the PSN. This means that the participant cannot share content online or download content from others.

Table 3.1 lists the policies (prescriptions) that apply to NyghtHawk's activities and content (inscriptions), provides a summary description of each policy, and lists the proprietary technologies that each policy applies to. The final column lists the activities and prescriptions that these policies most directly impact. The user experience of participation in the *LBP* ecosystem intertwines creative practices with a complex array of rules and regulations that define participation in contradictory ways. Once these rules are implemented as prescriptions, they become a sophisticated system for governing participation in the *LBP* ecosystem. Chapter 4 will discuss this system in much greater depth.

Table 3.1. Sony's and Media Molecule's terms of service and licensing agreements, as well as the proprietary systems, networks, and tools they govern. The table also shows which of NyghtHawk's activities and inscriptions use these technologies.

Policy	Summary Description	Proprietary Technologies	NyghtHawk's Activities and Inscriptions
Terms of Service and User Agreement, (TOSUA)	Includes policies regarding the use of the PSN and the types of content player-creators can produce for and share through the PSN. Also outlines the policies concerning the use of copyrighted material by users.	Playstation Network	• Costumes • Costume creation • *LittleBigPlanet* game levels
Terms of Service (TOS)	This agreement is similar to the TOSUA in its restrictions and purpose. However, it applies to the "PlayStation family of web sites" (Sony, 2011). These are sites outside of the PSN that are owned and maintained by either Sony or one of its development and publishing partners.	LittleBigWorkshop Forums	• Posting texts and images in forum posts • Knowledge work of discussing costume creation • Costume images (Figure 3.1)
System Software License Agreement (SSLA)	This policy defines the restrictions PS3 owners face regarding the operating system's software, including their inability to alter the operating system.	Playstation 3 Operating System	• The use of the system to create costumes • Playing *LittleBigPlanet*
End User License Agreement (EULA)	Applies to the *LBP 2* software and governs the use of the game and its content, as well any player-generated content..	*LBP* and *LBP 2* software	• Costumes • Costume creation • *LittleBigPlanet* game levels
Whitelist	An informal policy that is not published and does not require the consent of player-creators. It lists the third-party copyright holders who have expressed their wish that Media Molecule never moderate player-produced content that leverages these IPs.	Player-generated levels	• Costumes • Costume creation • *LittleBigPlanet* game levels • Forum posts and discussions • Costume images (Figure 3.1)

As Table 3.1 illustrates, each of NyghtHawk's participatory practices and the inscriptions he traces are affected by Sony's and Media Molecule's policies. As NyghtHawk creates costumes, captures JPEG images of those costumes, and moves those JPEGs over to a forum, he shifts his participatory work across the *LBP* ecosystem. He assembles numerous proprietary technologies and spaces to do so, such as *LittleBigPlanet*, the PS3, the PSN, and the LittleBigWorkshop.com forum. Shifting his work from one space to another (e.g., from the PSN to the LittleBigWorkshop.com forum), NyghtHawk also links each policy listed in the Table 3.1 to his inscriptions and his activity. Assembling the actor network also assembles a complex array of prescriptions that govern his activity from multiple directions at once. Sony and Media Molecule rely on an intricate arrangement of terms of service and licensing agreements to regulate the use of their websites, systems, networks, and tools. Each policy directly applies to specific technological actors in the ecosystem, establishing rules and limitations for their use.

All of these policies contain provisions regarding the IP interests of Sony and Media Molecule, player-creators, and third-party copyrights. For instance, the language of the EULA for *LittleBigPlanet 2* tells player-creators that reproducing copyrighted IP in player-created levels is not permitted:

> To comply with the terms of this agreement, you will not submit any User
>
> Generated Content that…is protected by copyright, patent, trademark,
>
> trade secret or otherwise subject to third party proprietary rights, including

rights of privacy and publicity (unless you are or have permission from the rightful owner). (Media Molecule, 2011)

According to the EULA and other policies, player-creators are not permitted to create and share any levels, characters, or stories that utilize copyrighted content. The participant must obtain written permission from the copyright holder. Without this permission, practices such as NyghtHawk's can be deemed illegal. Because NyghtHawk, PhadedWun, Grifindor_seekr and other forum participants use copyrighted IP as part of their knowledge work, their activities expose their participation to the risk of moderation by Sony and Media Molecule, or even legal action by copyright holders of the characters in NyghtHawk's JPEG image.

The policies and technologies described in Table 3.1 form "a loosely regimented but highly cohesive, hybrid network" aimed at protecting Sony's and Media Molecule's creative and copyright interests (Gillespie, 2006, p. 652). As stated earlier in this chapter, in order for NyghtHawk to connect his game software to the PSN, he must first agree to the EULA. In addition, the PS3's operating system and its use are subject to the System Software License Agreement (SSLA), which describes the same restrictions (Sony, 2009). Once connected to the PSN, NyghtHawk's activities also become subject to the Terms of Service and User Agreement (TOSUA) that applies to Sony's network. And the TOSUA contains language similar to the previous two policies, stating that player-creators "may not upload, post, stream, access, or otherwise transmit any content" that is "known to be infringing" the IP rights of Sony, Media Molecule, or

a third party (Sony, 2010). To add yet a fourth policy restricting NyghtHawk's use of copyrighted IP, the forums are subject to their own Terms of Service agreement (Sony, 2011). NyghtHawk faces four formal policies, all of which he must agree to in a way similar to the EULA, and all of which tell him his recreation of copyrighted characters is not permitted.

Yet, as this case study illustrates, this regimented network of policies does not serve as a strong deterrent to NyghtHawk and his peers. They still leverage copyrighted IP in their costumes and the knowledge work those costumes support. NyghtHawk's inscriptions are not only vital to the knowledge work of his participatory community, but his costumes also place these important player-creator activities at risk of moderation, or even outright banishment from Sony's and Media Molecule's services. His inscriptions are produced in systems owned by Sony and Media Molecule. His participatory activities leverage technologies and online spaces that those companies control. For this reason, NyghtHawk's inscriptions are entangled with prescriptions that forbid his practices, his creations, and by extension have the power to stall knowledge work he and his peers perform within the forums. As he expands his creative and social practices, his activities and his inscriptions are increasingly entangled with these policies and the limitations they define. In other words, the more he becomes a creator, the more he is exposed to Sony's and Media Molecule's governance. The user experience of participation becomes more and more difficult to discern in this complex mesh of contradictory policies and participatory practices.

But, as the next section illustrates, Sony's and Media Molecule's governance is unclear because the various policies do not seamlessly align with one another. Because these companies control these policies and their application, they can redefine the boundaries of participation in any or all of these spaces. Prescriptions can be either more strongly or more loosely applied, depending solely on Sony's and Media Molecule's decision-making. Gillespie (2006 & 2007) states that such policies are highly coordinated to develop strong boundaries for copyright protection in digital spaces. However, in the LBP ecosystem, the level of coordination among these policies is hidden from the player-creator's view. Companies may endorse or squelch local innovations such as NyghtHawk's without any notice or explanation. This reduces the player-creator's capacity to understand how these policies affect his practices and knowledge work, which in turn expands the power of Sony and Media Molecule to unilaterally define the LBP ecosystem. In this context, empowering participants is not a matter of clearly defining the boundaries of participation for them, but of veiling how those boundaries can shift in response to the companies' decisions.

3.3.1 A Contradictory Morality

A crucial contradiction arises from the presence of the Whitelist (Robinson, 2008) documented in Table 3.1. This Whitelist can contravene the copyright provisions of the other four policies shown in Table 3.1. According to Media Molecule executive Alex Evans, this Whitelist contains a list of "IP owners who came up to us and said please whitelist us—we'll never ask you to pull infringing

stuff" (Robinson, 2008). This policy provides a framework for contravening the other policies, such as the EULA or TOSUA—simply put, the copyright holder has the right to approve or disapprove any use of their IP. Player-created content that uses copyrighted IP may be left public or taken down from Sony's and Media Molecule's proprietary networks and sites with no explanation given to the player-creator.

What distinguishes the Whitelist from other policies in this ecosystem is that its prescriptions are not publicly visible. The names of copyright holders who have requested whitelisting are not publicly available. The contradictions among policies in *LBP* are critical not because they can undermine one another, but because the player-creator cannot fully understand how or why one policy may override another. Local inventions, such as using copyrighted IP to explore costume creation techniques, come to depend on the presence of the Whitelist in order to remain means of supporting knowledge work. The Whitelist offers provisions that may sanction such practices by creating an ambiguity in the morality of the space. This ambiguity allows companies such as Sony and Media Molecule to forcefully assert that activities such as using or recreating copyrighted IP are not permitted in the *LBP* ecosystem. Yet, they may also silently and selectively allow participants to engage in such activities. The contradictions traced here can empower participants such as NyghtHawk and his peers, allowing them the necessary space in which they can pursue their knowledge work in the LittleBigWorkshop.com forum. The ambiguity that arises from these contradictions gives Sony and Media Molecule the power to ignore

participatory activities that violate the restrictions put in place by policies such as the EULA or TOSUA. In doing so, this ambiguity extends a tacit legitimacy towards the activities of Nyghthawk and his peers. However, this very ambiguity also means that Sony and Media Molecule can easily shift their approach to such participatory practices. The invisibility of the Whitelist's provisions also weakens the power of player-creators by asking them to trust that Sony and Media Molecule will remain tolerant of practices such as NyghtHawk's.

The user experience of participation in this space situates NyghtHawk and others so that their efforts can be either permitted or moderated, but the participant has no way of clearly anticipating which decision Sony or Media Molecule may make. Player-produced content can remain untouched by Sony and Media Molecule, or it can be removed at any time, without warning or explanation. The issue at stake is not whether NyghtHawk and his peers are permitted to violate copyright restrictions. The primary user experience concern emerges from the fact that the actions (and in-actions) of Sony and Media Molecule may encourage activities such as the knowledge work performed by NyghtHawk and his peers, relying on copyrighted IP. Yet, these participants cannot know they have crossed these vaguely defined boundaries of participation until they suffer the consequences of doing so—consequences that may leave them disempowered or even disenfranchised as *LBP* actors.

The prescriptions in policies such as the EULA very clearly state to participants "you will not" and "you may not" perform activities such as using copyrighted IP in player-produced content. These prescriptions leave no room for

such practices, including NyghtHawk's costumes. In this way, both phrases from the EULA help establish one view of the "morality of [the] setting" (Akrich & Latour, 1992, p. 261). Prescriptions outlined in these policies establish Sony's and Media Molecule's definition of wrong, inappropriate, or illegitimate participatory activities—in this case, the use of copyrighted IP. The language in these agreements stating what participants cannot do is stringent and inflexible. However, there is no similarly strong, clear statement provided by the Whitelist to tell participants that "you can" use copyrighted content under certain conditions. Yet, inscriptions from both NyghtHawk and Media Molecule imply that using copyrighted content is both important for empowering players as creators and permissible. This is yet a different, murkier, and contradictory view of the space's morality. The ambiguity arising from these contradictions allows Sony and Media Molecule to shift the boundaries of participation, potentially disrupting the activities and knowledge work of NyghtHawk and his peers.

Acceptable participatory practices are defined along two competing, mutually exclusive lines of thought, both of them seemingly endorsed by Media Molecule. The ambiguity that these two competing moralities creates opens substantial space for participation because Sony and Media Molecule can avoid setting a clear precedent that defines where those boundaries In addition, these competing prescriptions are under the direct control of Sony and Media Molecule. The user experience of participation in this ecosystem can oscillate between each morality. But because these technologies are proprietary and Sony and Media Molecule establish the prescriptions that govern them and the use of

copyrighted IP, these companies can shift the scope of the limitations around NyghtHawk's practices at any time. His local innovations can be deemed acceptable in one instance, and then unacceptable or even illegal in another. And this can happen in ways and for reasons that are not clear to NyghtHawk. Policies may forbid his use of copyrighted IP in his costumes, but public statements from Media Molecule executives "refactoring" and turning players into "creators" (Robinson, 2008), the Whitelist, and activities by Media Molecule suggest he can use copyrighted IP. But he will never know with any certainty until he attempts to use copyrighted material and puts his activities and inscriptions at risk. For instance, it is possible that Sony or Media Molecule can determine that his costumes infringe on a copyright in the PSN, but they may ignore his use of the costumes in the LittleBigWorkshop.com forums. Or, it is possible that NyghtHawk's inscriptions may be pulled for infringing copyright, while JulesyJules' *Star Wars* remake remains both playable in the PSN and linked on LPB.me. Participants such as NyghtHawk and JulesyJules are never situated to clearly know why Sony and Media Molecule make these decisions.

The user experience the *LBP* ecology suggests that participation is possible, but always within the ever-shifting limits defined by Sony and Media Molecule. These contradictions simultaneously open up the potential for expanding participatory practice while also allowing Sony and Media Molecule to unilaterally stall participation. The user experience of participation can shift unpredictably, becoming fragile. This fragility requires participants to turn their knowledge work to more explicitly coordinative activity that traces the limits of

participation—activity that is traced and analyzed in Chapter 5. For participants, understanding the ways policies dynamically define the ecosystem is a critical user experience demand. For researchers and designers, understanding prescriptions as designed features of the user experience in the social web is crucial for understanding and designing networks in which knowledge work intersects with copyrighted IP.

3.4 THE IMPORTANCE OF LOCAL INNOVATIONS IN PARTICIPATION

The *LBP* ecosystem points to the need to consider local user innovations in the design of social web spaces where content produced by participants intersects with proprietary systems, networks, technologies and copyrighted IP. More specifically, researchers and designers must assess the network of terms of service and end user licensing agreements at work in these ecosystems as critical components of the user experience of participation in the social web. *LBP* provides researchers and designers with a useful understanding of the ways policies impact participatory practices and the inscriptions that participants produce. The relationships between prescriptions and inscriptions mutually construct the user experience of participation. *LBP* illustrates how contradictions among different policies in this user experience can affect participatory practices in this space. The boundaries that companies such as Sony and Media Molecule impose upon participation become elastic, able to expand and contract. This chapter has argued that the critical user experience issue is that social web participants are invited to participate as those boundaries expand outward, yet

they do not know when those boundaries contract inward until their content is removed. As Chapter 4 will argue, this experience is further complicated by the design of the moderation system that interprets and applies policies as network prescriptions.

Technical communicators are uniquely suited for tracing such issues. Our foundations in rhetoric and communication research provide us with a rich set of tools for exploring inscriptions, the practices they archive, and their importance for social interaction and knowledge work. Our more recent turn to user experience methodologies also allows us to examine the design and usability of the spaces in which these inscriptions are always associated with policies that govern proprietary systems and participatory practices. Once these approaches are combined, we can provide a much stronger approach to the user experience of participation that simultaneously enriches our understanding of participatory cultures and of the social web ecosystems that help sustain them. Tracing inscriptions and prescriptions and the ways the two are interconnected in these spaces is a critical component of such research and design work.

In the next chapter, I further explore the user experience of participation by examining the ways these contradictions are embedded in the design of technologies and processes that implement prescriptions. These technologies and processes simultaneously require participants to use them while they also work to either hide or harden the contradictions traced in this chapter. In this way, prescriptions can become monolithic presences that potentially overpower creative practices and inscriptions, regardless of the local exigencies of social

web participants. Researchers and designers must understand the relationships between inscriptions and prescriptions to explore these contradictions. In a similar way, they must also explore the relationships between contradictions and technological design in order to understand the impact of these usability issues on the user experience of participation.

CHAPTER 4

REDUCTIVE ACTORS: THE USER EXPERIENCE OF CONTRADICTIONS
EMBEDDED IN TECHNOLOGICAL DESIGN

4.1 INTRODUCTION

To further explore the user experience of participation in the

LittleBigPlanet ecosystem (*LBP*)[15], this chapter maps the relationships among

people and technologies that form within the Good Grief! System. This system is

the moderation process that Sony and Media Molecule use to govern player-

creator activity and the inscriptions[16] that they produce using *LittleBigPlanet*

(2008) and *LittleBigPlanet 2* (2011). Using Potts's (2009c & 2010; Potts & Jones,

2011) method for tracing assemblages of people, groups, and technologies in

actor networks, I analyze the connections among *LBP* participants, Sony and

Media Molecule moderators, and the moderation process. The Good Grief!

System relies on participants who police player-creator communities to report

content that violates the prescriptions[17] discussed in Chapter 3. These reports

are sent to moderators from Sony and Media Molecule who assess reported

content and decide whether or not it should be pulled from public view. However,

this work is performed behind closed doors: the bulk of the moderation process

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[15] I will use the *LBP* acronym to refer to the overall ecosystem of people, websites, games, and other digital tools that participants can use when producing or sharing content in *LittleBigPlanet* or *LittleBigPlanet 2*.

[16] *Inscriptions* are the textual traces of player-creator work (Latour, 1987 & 1999a) that participants produce in the form of game levels, costumes, images, and text.

[17] Akrich & Latour (1992) define a *prescription* as "what a device allows or forbids" actors to do within a network (p. 261). In this case, prescriptions can be traced through the numerous policies that govern this ecosystem, including the Whitelist, the End User License Agreement, and the Terms of Service User Agreement discussed later in this chapter.

disappears from the view of network participants as moderators interpret prescriptions and apply them without explanation. While these policies can be partially traced through the End User Licensing Agreement, the Terms of Service User Agreement, and the Whitelist, their implementation by moderators is invisible.

LBP is a critical site of research for technical communicators and user experience designers. In this ecosystem[18], the creative practices and knowledge work of participants are always embedded in a complex negotiation with companies such as Sony and Media Molecule over the boundaries of participation. For technical communication researchers, this space illustrates an ecosystem in which negotiation over participatory roles is a critical part of communication within the social web. This dissertation argues that an important element of that negotiation is the ability of participants to seek a stronger understanding of the boundaries of participation that are sanctioned by media companies. In this chapter, I illustrate how the technical infrastructure underlying the *LBP* ecosystem can hide those boundaries from participants.

This chapter traces the Good Grief! System as a series of actors and processes that are collapsed into a single node within the network that I refer to as a *reductive actor*. This actor funnels participatory activity and information through a narrow channel so that their roles in the moderation process can

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[18] Throughout this dissertation, I use the term *ecosystem* to describe the collection of technologies, information, and people that can be linked together in order to participate within the *LBP* community. This ecosystem can include the games, the Playstation 3, different websites created by Sony, Media Molecule, and fans, and third-party technologies that can be used to by participants to communicate with one another, such as Facebook or other social web tools.

disappear within the black box. The reductive actor appears to reduce the complexity of critical network processes, but it also reduces social web participants' capacity to understand how these processes might impact their participatory activities. These two maneuvers empower reductive actors to disrupt participants' control of their own network roles and identities, at least temporarily.[19] Without a clear view of the moderation process, relationships between participants and the companies Sony and Media Molecule become instances of struggle over the definition of participation within *LBP*. The reductive actor assumes a strong position of power from which it can affect the roles and tasks of other people, technologies, and processes within a network. The system reinforces its power by masking complex processes that are critical to the participation and knowledge work traced in Chapter 3.

Turning again to actor network theory (ANT), my analysis of the Good Grief! System identifies two key features of the reductive actor: the *obligatory passage point* and the *black box.* The obligatory passage point is a necessary pathway for information and activity in an actor network (Callon, 1986; Callon, Lascoumes, & Barthes, 2001). Any information that participants share with *LBP* moderators within the game must pass through the obligatory passage point. This passage point assumes unparalleled power to define communication and structure the relationship between these actors. The passage point works in conjunction with a black box, which is a single network node that collects several

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[19] Chapter 5 will explore ways in which participants turn to other social web tools to disrupt the reductive actor's authority. These participants seek out ways to bypass the obligatory passage point and pry open the black box so that they can make the moderation process more transparent.

network actors together so that they appear to "act as one piece" (Latour, 1987, p.

131). Complex processes are gathered together and encased within the black

box in order to simplify other network actors' interaction with these processes. In

this way, the rest of the network only needs to focus on the information that

enters and exits the black box rather than the processes that are hidden away

within it. Together, the obligatory passage point and the black box allow the

Good Grief! System to claim robust authority within the *LBP* ecosystem,

potentially disrupting the knowledge work of participants in ways that they cannot

fully anticipate.

4.2 THE MODERATION PROCESS

We can trace the moderation process in *LBP* by analyzing descriptions of

the Good Grief! System by Media Molecule representatives, the user interface

(UI) of the Good Grief! Menu within *LittleBigPlanet 2*, and the prescriptions

outlined in the policies that govern the *LBP* ecosystem. The Good Grief! System

is the moderation system that Media Molecule uses to identify player-created

content posted to the Playstation Network (PSN) that potentially violates the End

User License Agreement (EULA) discussed in Chapter 3. Media Molecule (2011)

describes the Good Grief! System as the "best way to report any inappropriate

content uploaded by other players" to the PSN (p. 17). This system incorporates

LBP participants, Media Molecule moderators, and technologies within the *LBP*

ecology to monitor the PSN and report any player-produced content that may

violate the prescriptions contained in the EULA.[20] In the booklet insert that comes

with *LittleBigPlanet* (2008), participants are encouraged to help "keep [the game]

as clean and respectable as possible" in order "to respect each other's feelings"

(p. 15). Participants are asked to "refrain from being rude! No swearing, no rude

drawings and nothing that would offend your granny" (p. 15). Participants are

asked to keep the lighthearted tone of the game intact, policing each other's

content in order to do so.

Participants use the Good Grief! Menu (Figure 4.1) to file these reports

with Sony and Media Molecule. This menu is accessed within *LittleBigPlanet* and

LittleBigPlanet 2 and gives participants the ability to capture examples of player-

produced content, label that content's potential violations, and submit their

reports to moderation teams. Drawing from the name of the menu and the

moderation system, both Media Molecule and *LBP* participants refer to this

process as *griefing*. The menu is an option for those playing through player-

created levels in the PSN. Upon opening the Good Grief! Menu, the system

automatically captures a digital image of the player-created level so that it is

attached to the report sent to moderators. This screencapture process happens

automatically.

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[20] As discussed in Chapter 3, a significant feature of these prescriptions are restrictions for using copyrighted content in player-created inscriptions, such as costumes, levels, or forum discussions.

Figure 4.1. The Good Grief! Menu user interface accessed within *LittleBigPlanet* and *LittleBigPlanet 2*.
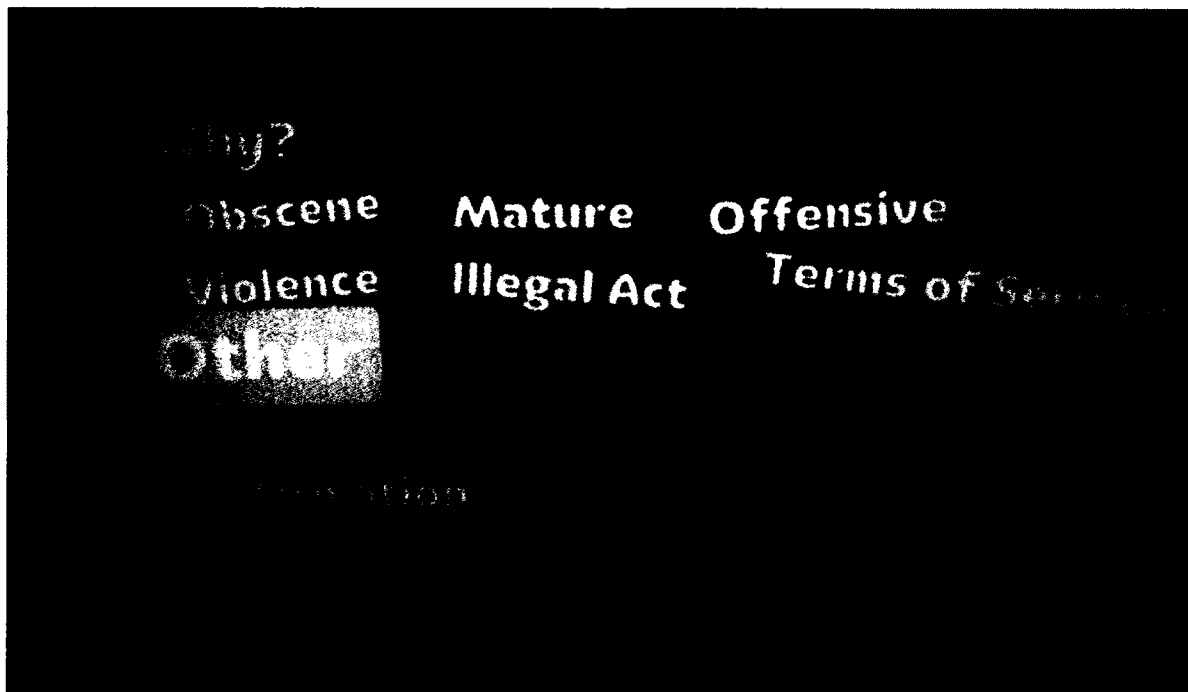
Next, the reporting player must answer the question "Why?" by selecting

from one of seven different categories for labeling the reported level (shown in

Figure 4.1). This selection is limited to just the seven categories and does not

allow the user to add any additional information in the form of a message or

comment. These categories reinforce this interface as an obligatory passage

point by giving the Good Grief! Menu the power to "define the identities" (Callon,

1986, p. 6) of the content that participants report. There are no features in the

menu that allow participants to add descriptions or custom keywords to the grief

report. This is an example in which meaningful context for a report can be lost

due to an experience or interface that restricts communicative practices of

participants from adapting to their local needs (Potts & Jones, 2011). One of the options in the Good Grief! Menu clearly references the policies that regulate copyrighted content and the activities of player-creators such as NyghtHawk and his peers: "Terms of Service." The participant cannot add more granular information to the report that may be useful for moderation teams to make their decisions.

The final step is confirming the submission in which participants are also warned that "the malicious misuse of this system will be taken extremely seriously" (EULA, 2011). Participants are discouraged from submitting false or "malicious" grief reports that may potentially clog the moderation system or place innocent player-creators at risk due to personal disputes or other spurious reasons. These reports include instances in which some players falsely claim that levels or other players have violated the prescriptions that govern content creation and sharing within *LittleBigPlanet*.

Moderation is a "people-powered" system (Potts, 2009c, p. 299) rather than a technologically driven one. In other words, people are situated all along the moderation process so that each step is driven by tasks and actions performed by network participants. According to Sam Bennett, Media Molecule's community manager, these reported (or *griefed*) levels are "placed into a queue to be checked over by moderation teams" that are "located around the world" (Sam_Protagonist, 2010).[21] The composition of these teams is unknown; the

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[21] The willingness of Media Molecule representatives to engage with participants in forums and blogs will be discussed in further detail in Chapter 5. Doing so is a critical moment in the ecosystem, pointing to ways in which participants can bypass reductive actors to seek information about moderation by working through other social systems and tools.

community does not know the individuals or which company they work for: Sony,

Media Molecule, or a third party. If these teams determine that content such as

NyghtHawk's work violates these policies, then that content is removed from the

PSN.[22] Human participants report player-created content to Sony and Media

Molecule. Human moderators working for those companies determine whether or

not reported content warrants being pulled from public view. From Bennett's

description, the implication is that both participants and moderators must

interpret the rules concerning copyrighted IP before such rules are implemented

as prescriptions. Participants must decide whether or not to grief a level they are

playing by judging whether or not the level violates network rules. And

moderators must decide whether or not a griefed level should be pulled from the

PSN based on their understanding of these rules.

As discussed in Chapter 3, Media Molecule uses five policies[23] to

establish the boundaries of participation for player-creators such as NyghtHawk.

However, these boundaries are never clearly defined because the policies

establish contradictory prescriptions for participation. For example, the EULA

unequivocally forbids player-creators such as NyghtHawk from using copyrighted

material in order to protect the intellectual property (IP) rights of copyright owners.

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[22] It should be noted that the process does not simply destroy player-created work. A copy of every level that a player-creator produces is stored locally on that player-creator's PS3 hard drive as well as within the PSN. He can republish that level by changing his local copy to comply with the necessary policy guidelines (Sam_Protagonist, 2010).

[23] These policies include the Terms of Service and User Agreement, the Terms of Service, the System Software License Agreement, the End User License Agreement, and the Whitelist. The first four are formal policies that participants must agree to in order to access sites such as the Playstation Network or use a device such as the Playstation 3. The Whitelist is an informal policy that users neither read nor agree to, but contains the names of companies who have expressed their wish to allow participants to use copyrighted IP in player-produced content.

However, a Whitelist maintained by Media Molecule establishes different prescriptions wherein NyghtHawk, PhadedWun, Grifindor_seekr, and their peers may use copyrighted IP. Yet, whereas the EULA's prescriptions are clearly stated and published, the Whitelist's prescriptions are not. And moderation teams do not explain why one policy may apply in a specific situation while the other does not. The Good Grief! System allows people (participants and moderators) to interpret and implement policies as network prescriptions. Participants identify and report levels, while moderators make the ultimate determination of whether or not these levels should be removed from the PSN. But the Good Grief! System provides no measures for clarifying how moderators make decisions, or why one set of rules and not another applies to the governance of some levels. As one commenter in a discussion form states, "We all know how to make a complaint about a level, but we don't know what happens next" (shrubman, 2008). Whether levels are moderated or not, moderators never give participants clearly specified reasons for their decisions. The level is made unavailable and the level's creator receives a message indicating their level has been pulled (Sam_Protagonist, 2008b). There is no further explanation.

This dissertation argues that participation within social web ecosystems demands a user experience in which participants can understand how their creative practices and knowledge work are linked to proprietary networks, processes, and policies. I am not arguing that participants should be able to break any rules or laws that may govern copyrighted material or intellectual property. However, effective experience design for such ecosystems will support

social web participants as they situate themselves in relationship to other actors.

Only then can participants begin to define the knowledge work that is necessary

for them to effectively participate as content producers. Chapter 3 traced the

tension that emerges when such knowledge work co-exists alongside

prescriptions that are unclear to participants. As the next section illustrates, the

ability to effectively situate oneself within the ecosystem and coordinate with

other actors is thwarted by the design of processes and technologies that Sony

and Media Molecule use to implement these prescriptions. Contradictory

expectations are embedded in the design of processes and technologies. This

places participants at risk of seeing their work removed, or even of having their

accounts within Sony and Media Molecule networks banned. Participation can be

stifled simply because participants cannot understand or anticipate how their

content, practices, and work are situated within the boundaries outlined by

prescriptions.

4.3 MAPPING MODERATION

To identify reductive actors, I use Potts's (2009c & 2010) method of

diagramming actor networks as a means of "mapping the available actors"

(2009c, p. 286) in the Good Grief! System network. Using this method, I can

pinpoint the connections among the reductive actors and their constituent

network components, their interfaces, and other people, groups, or technologies

working in *LBP*. I augment Potts's method by analyzing these reductive actors as

obligatory passage points that help establish *black boxes* from which moderator

decisions are issued. Obligatory passage points establish nodes from which reductive actors can monitor and exert control over participatory activity. With black boxes, reductive actors turn a "juxtaposition of interests" into a "durable whole" (Latour, 1987, p. 122). Discrete actors that may have different tasks or purposes are collected into a single network position and made to appear as if they are one unified component.

In the *LBP* ecosystem, I argue that reductive actors use a black box to mask the moderation process so that the interpretation of contradictory prescriptions by moderation teams disappear from the participant's view. In a black box, complex relationships and processes linking disparate (even competing) actors can be simplified, or at least appear simpler to actors outside of the black box (Spinuzzi, 2008). Latour (1987) describes the black box as an "assembly of disorderly and unreliable allies" that "act as one piece" (pp. 130-131). Different actors are collected together and made to appear as a single whole. In the Good Grief! System, moderators and policies are collected together into a process that is hidden from view so that the Good Grief! System can appear to operate as a single unit, rather than a series of processes and decisions. Without a view of the moderation process and how prescriptions are interpreted and applied, participants who produce and share content within the *LBP* ecosystem cannot anticipate how or why content may be reported or moderated.

It is not that the participant is necessarily unaware that contradictions exist. However, participants are only able to interact with the moderation process

through the Good Grief! Menu. For this reason, the interface of the Good Grief! Menu becomes an obligatory passage point that directs information into the black box where that information is examined and moderators make decisions. This interface occupies a "strategic position" in participatory processes (Latour, 1987, p. 245) that situate the black box as an "indispensable" feature of these processes (Callon, Lascoumes, & Barthes, 2001, p. 62). The obligatory passage point is a required passage. The Good Grief! Menu is a required pathway that funnels participants' grief reports into the black box of the Good Grief! System. This black box, then, makes the implementation of policies difficult, if not impossible, to see. The obligatory passage point helps establish the black box by structuring the relationships that participants such as player-creators have with the moderation process. The Good Grief! Menu distances participants from the moderation process, effectively hiding that process from view. The flow of information into and out of the black box is tightly regulated while the processes within the black box are invisible. Combined, these two features give rise to the reductive actor.

Potts's method allows researchers and designers to map the connections among people and technologies in complex social web ecosystems. My analysis examines the resulting map to identify obligatory passage points and potential black boxes that power the reductive actor. This type of research provides researchers and designers with a way of understanding how policy and technology combine to form the user experience of participation. The *LBP* ecosystem illustrates how such a combination structures relationships among

network actors, including the relationships that participants may have with each other, the content they create and share, and the digital tools at their disposal.

4.4 THE GOOD GRIEF! MENU AS OBLIGATORY PASSAGE POINT

Figure 4.2 maps the actor network of the Good Grief! System described above, identifying the actors and visualizing them as different shapes within a stencil (Potts, 2008, 2009c, & 2010). In the diagram, individual participants are represented as circles, while groups of people such as moderation teams are shown as clusters of circles that indicate multiple individuals that appear as one group. Digital technologies are squares with rounded edges, including the Good Grief! Menu and the player-created level that is reported. The policies in this actor network are squares with sharp corners. The arrows illustrate how the Good Grief! System generally configures connections among these actors without specifying the strength or duration of these connections. This map begins the process of mapping "shifts in practice" through the connections among actors (Potts, 2010, p. 307). Based on Bennett's (Sam_Protagonist, 2010) description and the workflow for submitting grief reports, the map does not show a particular instance of use. Instead, it illustrates the process of moderation as a system wherein policies are implemented as regulatory prescriptions on one side of the Good Grief! Menu. Participant activity occurs on the other side of the menu, away from moderation teams. This diagram shows not only the people-powered design of moderation, but also how different people, policies, and technologies are configured in relationships with one another.

Figure 4.2. Actor network diagram of the Good Grief! System
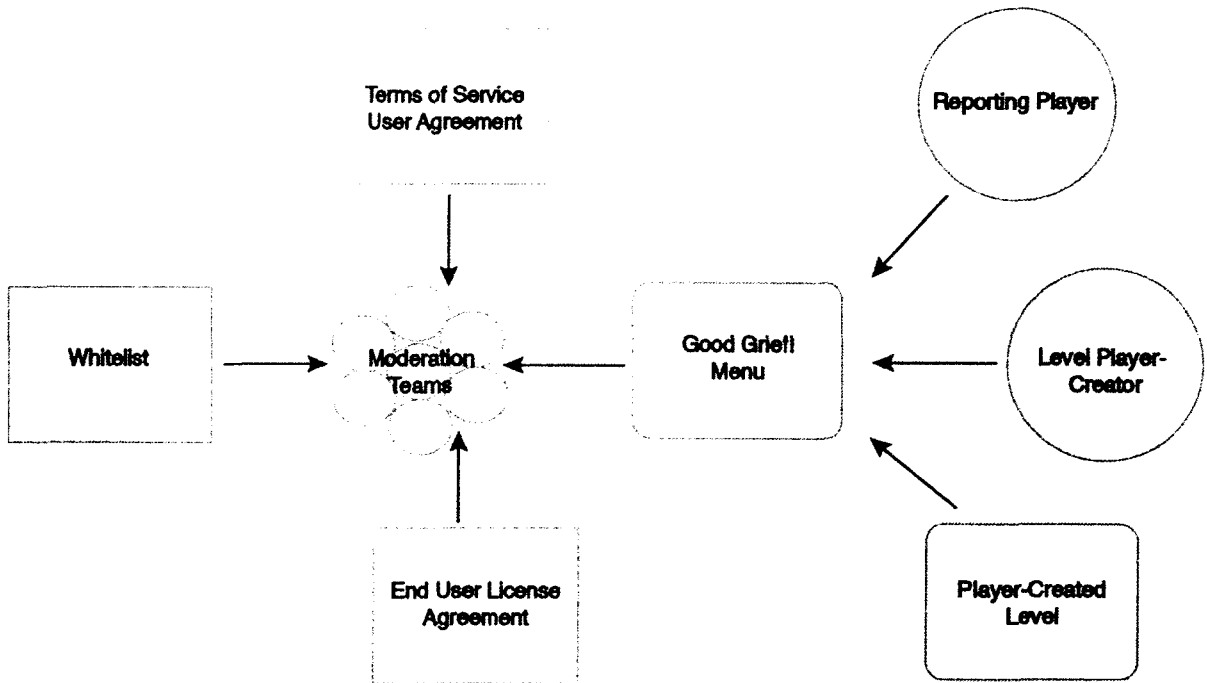
Information is pushed through the Menu from participants to moderators.

Figure 4.2 shows that this information flow is unidirectional so that reports are

pushed to moderation teams where the assessment of griefed content takes

place. The menu is situated between participants and the rest of the Good Grief!

System. In the Good Grief! System actor network, the Good Grief! Menu is

necessary for the moderation process to function. The Good Grief! Menu

becomes a "chokepoint where policy or technical administrative authority or both

are concentrated" (Mueller, 2010, p. 47). As stated before, this menu is the

interface participants have with the moderation process. The menu collects

information from participants without returning any to them. Participants are

turned into monitors in the process without collecting or sharing information regarding the practices or content that is captured in the report.

In this way, the Good Grief! System can "build in roles for users to play and paths for them to follow" (Gillespie, 2007, p. 80). Player-creators whose work is reported remain unaware of the process unless their levels are pulled from the PSN. Moderators are situated on the other side of the menu as examiners whose decisions are unquestionable and difficult for participants to anticipate. In its position between participants and moderators, this obligatory passage point becomes a critical tool for solidifying the authority of moderators and the authority of the moderation process.

4.4.1 Distancing Participants from Moderation

The menu organizes the moderation process by distancing player-creators and participants who report levels from the rest of the actor network. While these participants can view the details of policies such as the TOSUA and EULA in various documents such as web pages, they cannot view how moderation teams interpret those policies or make decisions based on the prescriptions they outline. Nor do participants have a direct link to moderation teams in order to explore this process. The Good Grief! Menu is participants' point-of-contact with the moderation process, making the menu an interface between participants and moderators. Cooper and Reiman (2003) point out that "well-orchestrated interfaces are transparent" (p. 123). In other words, the interface should not interfere with the tasks or activities of those using a system, but facilitate a

seamless communication between actors. The interface disappears so that the activity becomes highly visible and the technology supports a user's tasks.

With the Good Grief! System, this convention is utilized in a way that actively masks the moderation process. There are no tools for communicating with moderators, or for even adding descriptive comments or notes to the grief report. A critical touchpoint between participants and moderators facilitates unilateral data collection from the former to the latter rather than communication and information sharing. Another forum thread on the site getsatisfaction.com illustrates this point by discussing whether a poster's experience in *LittleBigPlanet 2* is an instance of official moderation or a software glitch. When the participant's in-game content is moderated three times in one week, he asks the forum, "Does Mm even look at the 'good greif' reports to see if its even worth moderating? or does the reports go into some computer thing or some wierd technological thingy like that" (Sponkers, 2011). One respondent in the forum thread replies, "Could be that a custom sticker used had been moderated for one reason or another" (Wolfdre, 2011). Still another suggests, "This sounds like a glitch (not definitive, but it's weird enough)...I realize it would be a bit of a pain, but it might be worth trying to recreate the pod from scratch and seeing if you still have that issue" (Talasea, 2011). The Good Grief! Menu does not collect context for grief reports, and such useful information is thus not made available to participants to understand what boundaries they breached when creating content. In this case, participants are not sure whether or not Sponkers's experience is the result of moderation or a software problem. There is no clear interface

between participants and moderators that allows participants to learn what has happened or why.

As Green and Jenkins (2009) note, participation maintains a "complex interplay" among people, organizations, and technologies (p. 215). Yet, in *LBP*, the Good Grief! Menu truncates any potential interaction between participants and the moderation process by limiting reporting players to no more than the initial grief report. In their research discussing the relative equity of the relationships between fans and media corporations, Green and Jenkins state that this complex interplay needs to include fans as important participants in the meaning-making processes of cultural production. For moderation in the Good Grief! System, Green and Jenkins' approach suggests that participants can and should serve as moderators embedded within the community to better understand its local practices and purposes.

But this is not the case in the Good Grief! System. Recall shrubman's (2008) comment discussed earlier: "We all know how to make a complaint about a level, but we don't know what happens next." The menu interface does not represent the moderation process to participants; instead, it acts as a one-way valve through which participants can push information to moderators while never extracting any from them. By inserting distance between participants and moderation in this actor network, the menu can "determine a set of actors and define their identities" (Callon, 1986, p. 6). Participants can file reports, but they cannot become moderators. The Menu limits the participants' roles in the moderation process. Participants cannot see the ways that prescriptions are

interpreted and implemented by moderators, nor do participants have any role the interpretation and implementation of these policies. Moreover, as Sponkers's example demonstrates, participants may only find themselves in the role of a confused victim seeking answers from within the *LBP* community.

4.4.2 Participation Requires Risk

By inserting this distance between participants and the moderation process, the reductive actor of the Good Grief! System disrupts the user experience of participation so that player-creators are always at risk of moderation. Participants are asked to initiate the moderation process, but they cannot take part in determining whether or not reported content merits removal from a network such as the PSN. There is no context behind the grief reports because the Good Grief! Menu does not require or permit dialogue between participants and moderators. The comment posted by shrubman above pointedly critiques how this distance structures connections among actors. If participants are to coordinate their activities with the prescriptions outlined in policies, then the inability to either understand those prescriptions or how they are applied critically foreshortens their ability to organize effectively within the boundaries outlined in these policies. The design and implementation of policy becomes a crucial element of the user experience of participation within these ecosystems because participants potentially risk both their content and their participatory roles by producing and sharing their work.

In NyghtHawk's case, he bases his costumes and characters on copyrighted IP—popular movie and comic book characters such as Joker and Captain America. According to the EULA, this activity is not permissible. If a player reports NyghtHawk's costumes for violating the EULA, neither the player nor NyghtHawk know how moderators assess his costumes. In this way, the Good Grief! Menu can "control space and time" (Latour, 1987, p. 245). The prescriptions in the policies discussed in Chapter 3 suggest that NyghtHawk's work is not permitted, but that it is permitted in certain circumstances. But neither the prescriptions themselves nor the ways they are implemented clearly indicate what those circumstances are.

In another example, a participant writing in the LittleBigLand.com forums states, "2 of my brothers levels were moderated, I still don't know what's happened to them…I think [Sony or Media Molecule] should at least tell us WHY our level is being moderated" (Shockwave321, 2008). In this example, the user experience of participation that results from Shockwave321's connection with the moderation process leaves him feeling both ambushed and unsure why the content was pulled. Though Shockwave321 does not indicate that the moderated content used copyrighted IP, his example illustrates how he is distanced from the moderation process and the confusion that results from it. The Good Grief! System only darkens the participant's understanding of the moderation process. Participants such as NyghtHawk or Shockwave321 cannot know what the boundaries of participation are until their work has been moderated. They must

risk their work and their roles as participants to participate as player-creators in *LBP*.

The user experience of participation in *LBP* suggests that the boundaries of participation are flexible—moderators must interpret contradictory policies and apply them as prescriptions to reported levels. By relying on a case-by-case application of these prescriptions, Sony and Media Molecule leave open the possibility that the boundaries of participation can expand and contract. However, only Sony and Media Molecule have the ability to actually expand or contract these boundaries, defining the scope of activity that participants are allowed to pursue in the *LBP* ecosystem. In other words, player-creators and others can participant in the ecosystem, but only within the rules that are established by Sony and Media Molecule through different policies. Using copyrighted IP and the knowledge work it supports may be possible within the boundaries established when moderators interpret and apply prescriptions. Yet, participants are not given full access to the rules themselves, or how those rules are interpreted and applied by Sony and Media Molecule. The Good Grief! System's design disrupts the participant's understanding of the boundaries created by these rules.

In a system in which user-generated content—such as the costumes, characters, images, and text produced by NyghtHawk, Shockwave321, Blastroid, and their peers—intersects with policies that govern these practices, gaps between participant expectations and corporate expectations can quickly arise. Participants can develop expectations based on their local needs—needs that

may be permitted for a certain period only to be rejected later without warning.

The design and implementation of digital tools by media companies is a crucial

part of the user experience of information sharing within the social web (Potts,

2010). In the case of *LBP*, there is also a clear need to understand the impact

policies such as the EULA can have on the ecosystem of participants, their social

activities, and their knowledge work. Technological design is coupled with policy

design and implementation. Accounting for the dynamic needs of participants

and knowledge work is crucial. In social web ecosystems, researchers and

designers must approach the combined design of policies, processes, and

technologies as a symbiotic system that can significantly affect a participant's

capabilities and agency. Only by understanding this broader, more holistic view

of social web experiences can we begin to develop a stronger approach to the

research and design of the user experience of participation. Doing so is critical

for understanding both cultural practice within the social web and how to design

usable digital systems that accommodate these practices in well-defined ways.

4.5 THE BLACK BOX FORMS

Moderation teams interpret and implement contradictory prescriptions in a

proprietary space that is inaccessible to participants. Neither the reporting player

nor the player-creator directly participates with the moderation decision. The

implementation of prescriptions is hidden from view. By situating the Good Grief!

Menu as an obligatory passage point between participants and the rest of the

moderation process, the design of the Good Grief! System encloses the

implementation of prescriptions within a black box. As Figure 4.3 shows, once

information is encased within the black box, player-creators and reporting

participants do not have any access to the moderation process. But the

connections that moderators make between policies such as the EULA, TOSUA,

and Whitelist are invisible. Participants outside of the black box cannot see how

moderators interpret and apply these rules. Combined with the obligatory

passage point of the Good Grief! Menu, the reductive actor emerges in full force,

gathering information from participants about player-created level while hiding

the process from them.

Figure 4.3. Actor network diagram showing the Good Grief! System as a reductive actor
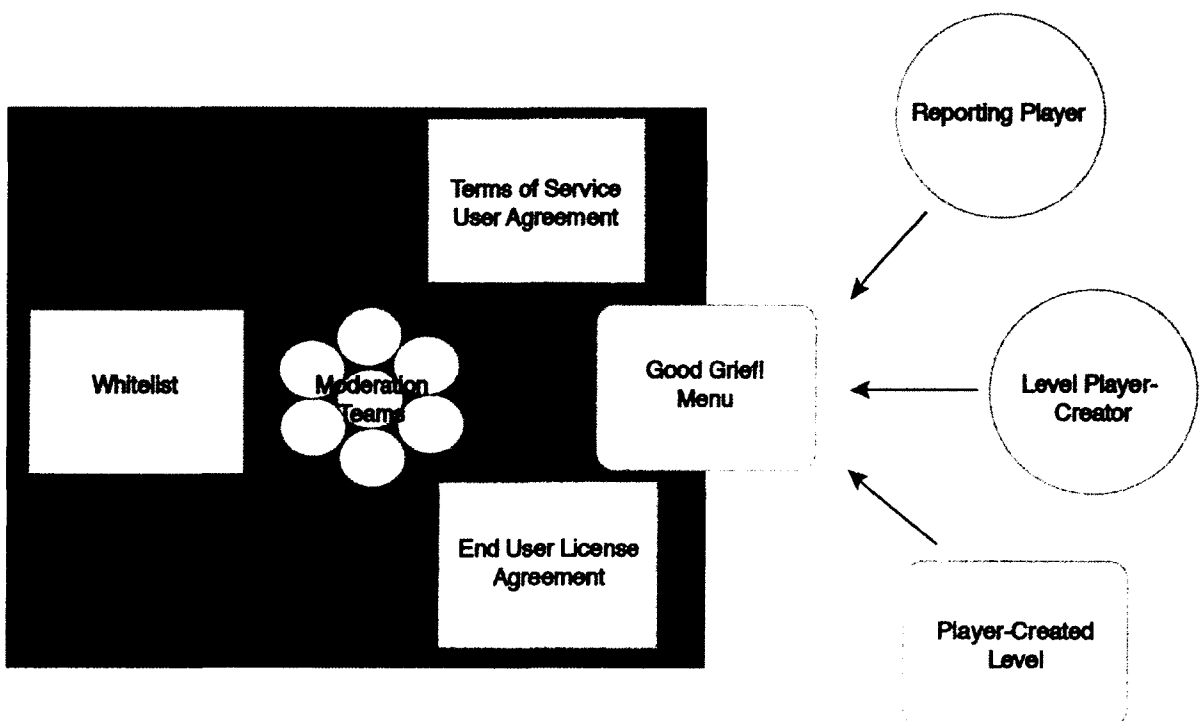
Spinuzzi (2008) provides a detailed examination of black boxes as integral elements of networked communication In his research of complex networks among telecommunications workers, black boxes often serve as a "stabilizing regime" that simplify the interactions between complex activities or processes and other actors (pp. 202-203). Through "routines, protocols, and tools" that reduce the complexity of systems and processes, black boxes allow people to more easily communicate across social, technological, and organizational boundaries (p. 203). The complexities of sharing texts, data, and information across such boundaries are reduced into "something that resembles an organized whole" (Latour, 1987, pp. 130-131). If the black box is effective, Latour argues, then it becomes "entirely opaque" to other network actors (p. 183), appearing to operate on its "own impetus" (1987, p. 132). In other words, the complex relationships encased within the black box disappear from view as the black box takes their place. Black boxes are important components of complex information networks because they help people establish "relatively stable interfaces" that better support "relatively stable assemblages" (Spinuzzi, 2008, p. 193). Black boxes help forge an infrastructure for streamlining communication by allowing participants to focus on information rather than sophisticated processes. In a black box, the associations among groups of actors and the processes for maintaining those associations are encased within a black box so that other network actors "need focus only on [the black box's] inputs and outputs and not its internal complexity" (Latour, 1999a, p. 304). The black box's ability to simplify complexity can help participants in the network as they focus on their activities.

By enabling and empowering network participants to focus on their activities and goals rather than troubleshooting or learning complex processes, black boxes also enable the network to stabilize as long as participants may need.

However, in a reductive actor such as the Good Grief! System, not only does the internal complexity of relationships among actors disappear within the black box, but the power of the actor network is concentrated within the black box, as well. The black box within a reductive actor differentiates itself from the black boxes traced by Spinuzzi (2008) by shedding its role as a coordinative liaison and becoming an apparatus of control, instead. The complexities of moderation appear not only as a single actor in the way Latour describes; the single actor also appears as an inscrutable monolith whose function is unpredictable and uncontestable. Encased within the black box, moderation can occur without scrutiny from participants. For example, Blastroid (2009) states in a discussion forum maintained by Media Molecule: "Well my Bank Robbery – Jewel Thief level got moderated. Of course with the moderation system there were no details to help me track down the problem." Unless Blastroid edits his copy of the level to change the offending element, then he cannot republish it for others to play. But he has no information telling him why his level was moderated. The interpretation and application of prescriptions that construct boundaries around Blastroid's participatory activities are made invisible. The moderation process is hidden in a way that reduces the participant's ability to understand how to avoid moderation.

4.5.1 Shifting Knowledge Work from Production to Moderation

Gillespie (2006) suggests that in the race to preserve the integrity of copyrights for IP owners, technologies are often designed so that their "inner workings [are] rendered invisible," meaning that copyright regulations or other prescriptions can be "enforced perfectly" (pp. 652-653). By rendering moderation invisible, the reductive actor simultaneously reinforces both the prescriptions that govern the ecosystem, as well as the apparent contradictions among them. Participants cannot know or anticipate how moderators resolve those contradictions by interpreting and applying prescriptions within the ecosystem. The local innovations of participants and the knowledge work they perform can be disrupted without warning or explanation. The only recourse participants have is to shift their knowledge work so that they move away from producing content or exploring and expanding their participatory skills.[24] Instead, they must now trace how and why moderation occurs.[25]

Tucked within a reductive actor and made invisible, proprietary systems, networks, or processes such as the Good Grief! System become more difficult to hack or break. The Good Grief! System goes another step further. It preserves the moderation process by reducing the ways in which participants can scrutinize how moderators interpret and apply policies. The user experience of participation

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[24] Chapter 3 explores these activities in greater details, examining the tension between the content that participants create (*inscription*) and the rules and regulations that govern these activities (*prescriptions*). Here, the key point is that the design and implementation of prescriptions can force participants to alter their activity in order to simply understand how and why the moderation process occurs.

[25] Chapter 5 explores this shift in knowledge work more thoroughly by examining the ways participants enlist other social web tools to alter the actor network and shed light on the moderation process.

in this actor network privileges the reductive actor so that prescriptions are strengthened. The moderation process is not just designed to be difficult to hack. It is designed to be inscrutable and monolithic, becoming nearly unquestionable. Prescriptions become a "paradoxical presence" so that they are "at once invisible yet tangible" (Latour, 2005, p. 21), strengthened through their lack of visibility and powerful enough to disrupt participatory activity at will and without question to its authority.

Instead of clarifying and simplifying the participants' relationships with prescriptions, the Good Grief! System obscures these relationships by constructing a black box that excludes participants from understanding the methods Sony and Media Molecule use to govern the *LBP* ecology. *LBP* participants such as NyghtHawk and his peers demonstrate a wide variety of creative skills in their participatory activities. But their activities and knowledge work are constantly at risk of being stopped or even punished by the same network actors (Sony and Media Molecule) who promote *LBP*'s capacity for "unlimited" creative expression (Media Molecule, 2008 & 2011). Constructing a black box around moderation enables the reductive actor of the Good Grief! System to disenfranchise (even displace) these player-creators as participatory agents who exercise control over their activities in order to grow and learn as full network participants. Participants cannot know the boundaries established by prescriptions until the content they produce is moderated. At minimum, player-produced content is exposed to this risk. At maximum, player-creators may be punished by seeing their PSN accounts banned, or perhaps even by facing

potential legal action over their use of copyrighted IP. The very knowledge work of learning tools and features in this social web ecology also places participants at risk.

Due to the black box within the reductive actor, persistent and significant risk is a key element of the user experience of participation encountered by NyghtHawk and his peers. Participants such as Shockwave321 or Blastroid, their activities, and their content are linked to moderation, but not in ways they can control or fully anticipate. Participants who leverage copyrighted IP will not know the extent to which their work is permissible within the *LBP* ecosystem unless their content is moderated. A player-creator will never know if his work has been examined for moderation unless it is pulled from the PSN. Then, participants will receive a notification in the *LittleBigPlanet* game that their level was pulled, but with no explanation as to why. These policies and their implementation are critical components of the user experience design of social web ecosystems such as *LBP*. The intersection between copyrighted IP, the creative and knowledge work practices of participatory cultures, and social web technologies is also a crucial area of research for technical communicators and user experience designers moving forward. Our expertise can shed light on such issues by providing a deeper understanding of the social and cultural practices of participatory communities that use digital technologies.

4.6 THE DOUBLE MANEUVER OF THE REDUCTIVE ACTOR

As stated above, the reductive actor is one that takes on the

characteristics of a black box while also positioning itself as an obligatory

passage point. In what Callon (1986) would describe as a "double movement" (p.

6), the reductive actor combines its function as a black box with its position as an

obligatory passage point for participatory activity or user-generated content. This

is not a *movement* in the way that the term has been used throughout this

dissertation. In my research, *movement* describes the ways that people and

content can shift across digital ecosystems so that participants can coordinate

information and produce knowledge. Reductive actors do not shift content,

information, and people in the same way. Instead, reductive actors tend to lock at

least sections of the actor network down, reducing the mobility that is so

important in participatory cultures and the actor networks that they assemble.

This combination of black box and obligatory passage point can be better

described as a *double maneuver* in which the reductive actor occupies a strong

position within the network. From this position, the reductive actor can much

more strongly exercise its authority. This maneuver strengthens reductive actors

so that, like an obligatory passage point, they can "determine a set of actors and

define their identities" (Callon, 1986, p. 6). Reductive actors require participants

to use them while also obscuring the ways prescriptions bound the scope of

activity and agency of participants. Reductive actors are both opaque and

situated within strategic network positions in order to establish an orthodox user

experience of participation. From its cloaked position of power, a reductive actor

can monitor the activities of other actors (including participants), the inscriptions they leave behind, and the ways they understand the prescriptions governing the assemblage.

In this way, the *LBP* ecosystem appears at its surface to be a "cosmic imagisphere" of "infinite" creative potential (Media Molecule, 2008). Yet, underpinning this ecology is a system designed to limit this "imagisphere" in response to the shifting needs encountered by Sony and Media Molecule. These companies can instantly change "infinite" creative potential for an impenetrable rule of law that only they define. The *LBP* ecology can adapt to the local needs of actors in the way Spinuzzi (2003 & 2008) argues is critical for sociotechnical networks. But the design of the Good Grief! System suggests that any such adaptation will only happen in a way that Sony and Media Molecule are willing to permit. In discussing black boxes, Latour (1987) suggests that power is always a part of the black box's capabilities within an actor network. The black box can establish "new undisputed facts" that are reinforced as the black box appears to be an automation, a machine, one more piece of equipment" (p. 131). Cloaking the moderation process of the Good Grief! System within a black box gives the reductive actor the power of a machine that controls the actor network. Even though this process is powered by people, the decisions about moderation simply appear without warning and appear as an arbitrary application of prescriptions. Participants cannot appeal moderator decisions in order to preserve their work or seek further explanation.

The reductive actor allows people-powered processes to appear as mechanized, impenetrable devices that can sever connections among actors and decide who is permitted to participate as a player-creator. Though NyghtHawk's activities in both the PSN and the LittleBigWorkshop.com forums discussed in Chapter 3 have not faced moderation, he is constantly at risk of losing his content or even his access to the PSN should the machinery of moderation suddenly change how it works. As Blastroid's example indicates, participants must often shift roles as participants, transitioning from player-creator producing content to forum participant seeking information about why a level was moderated. The key point is that this shift in roles is forced upon the participant by the reductive actor that hides the information Blastroid is seeking. If a participant's PSN account is banned, he cannot participate in either *LittleBigPlanet* or in the LittleBigWorkshop.com discussion forum. Not only is the ability to participate as a player-creator reduced, but so is the participant's ability to find out why he was banned from *LBP* or the PSN. The reductive actor can determine the stability of a participant's connections to the actor network, and it can determine what his role is as a participant once he is part of the assemblage.

Because reductive actors can perform this double maneuver, the user experience of participation in this ecosystem is not designed to empower player-creators as participants who need to learn and explore the boundaries of participation. Instead, this user experience disempowers participants as knowledgeable actors. Reductive actors reduce participants' capacity to respond to their own local needs and those of others within a complex social web ecology.

Reductive actors concentrate power into the hands of network owners, such as Sony and Media Molecule. But, they do so by veiling the ways in which those network owners wield power and implement policy at their own discretion. Contradictions in policies in *LBP* provide an opening for player-creators and other participants to use copyrighted IP as a crucial component of their knowledge work for learning the tools and processes of participation. However, participants always face the reductive actor of the Good Grief! System as a weapon that can foreshorten the scope of participants' agency as knowledge workers in the "cosmic imagisphere" described in *LittleBigPlanet*'s opening cinematic scene (Media Molecule, 2008).

Researchers and designers must better understand how to empower participants as valuable contributors to information management and knowledge work in the social web. We must look at how the tools at their disposal and the processes within the network respond to their local circumstances and inventions. The policies that govern such systems are critical components of this user experience. Researchers and designers must explore the implementation of policies that govern the use of social web technologies as a significant element of user experience design. The *LBP* ecology points to the ways in which the design of social web technologies and the design of the policies that govern those technologies can significantly alter the user experience of participation in the broader social web.

CHAPTER 5

GENERATIVE NETWORKS: COORDINATIVE WORK, FIRE SPACE, AND
MOVEMENT IN THE USER EXPERIENCE OF PARTICIPATION

5.1 INTRODUCTION

This chapter analyzes the strategies and practices of social web

participants as they seek to disrupt the processes and technologies of Sony's

moderation. Using social web tools such as forums and blogs, these participants

establish what I call a *generative network* that supports participants' abilities to

coordinate information across the ecosystem and generate knowledge about the

network's structure. In the *LittleBigPlanet* ecosystem (*LBP*), player-creators often

use tools such as blogs and forums to discuss processes and skills for producing

costumes or levels.[26] This chapter illustrates how participants shift such

knowledge work strategies from the production of content to "coordinative work"

known as *net work* (Spinuzzi, 2008, p. 137). Through net work, *LBP* participants

try to trace the boundaries of participation, and to even redefine that participation.

The case study in this chapter illustrates that by coordinating information across

the *LBP* ecosystem, participants can produce new knowledge and assert

themselves more directly into at least some of the moderation processes that

police player-produced content. This net work points to some of the culturally

situated activities that are meaningful for *LBP* participants. By tracing these

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[26] As discussed in Chapter 3 of this dissertation, by critiquing each other's skills using player-produced content that is derived from copyrighted intellectual property, participants are able to perform crucial knowledge work that helps them better learn how to participate within the *LBP* ecosystem.

activities and identifying their cultural significance, researchers and designers will better understand how digital ecosystems can support participatory cultures.

Net work describes the ways in which participants "work to reaffirm and redefine alliances" within the ecosystem (Spinuzzi, 2008, p. 144). Many *LBP* participants turn to social networking platforms in order to coordinate information across the ecosystem. In Chapter 3, participants leveraged the discussion forums at LittleBigWorkshop.com to post and critique examples of their creative work within the game. In this chapter, participants turn to the social customer service network GetSatisfaction.com to analyze and seek resolutions to problems that they encounter within the ecosystem. Described in more detail later, GetSatisfaction.com is a third-party service not affiliated with Sony or Media Molecule. Instead, these companies subscribe to GetSatisfaction.com in order to create discussion forums intended to promote stronger customer service relationships. The forum does so by fostering participation as an effort to coordinate information between people and between systems that are stretched across the ecosystem. Law and Mol (2003) state that "it takes effort, work, to maintain a stable" network among actors (p. 3). GetSatisfaction.com is an example of a tool that supports this effort. By studying it as a cultural space and a social web tool, researchers and designers can better understand the ways participants leverage tools to generate knowledge about the boundaries of participation or even alter those boundaries.

I argue in this chapter that these participants leverage these tools to move information across the ecosystem and coordinate information, producing a

generative network. The generative network is an assemblage of people and technologies that help participants uncover new information and generate new knowledge. As this chapter illustrates, a generative network depends on what Law and Mol describe as a *fire space*, or a network in which "abrupt and discontinuous movements" are important to maintaining the actor network and the meaning it supports (p. 7). Thus, the net work that participants perform is contingent upon this fire space and the ways that social web tools do or do not support such efforts. Tracing and describing the emergence of the generative network enables researchers and designers to understand how participants link both technologies and information across social web ecosystems. Armed with such knowledge, we can better situate participatory practices within a deeper understanding of their cultural importance, and we can better design for net work they perform within these spaces.

5.2 MOVEMENT AND FIRE SPACE

As discussed in Chapter 3, Diehl, Grabill, Hart-Davidson, and Iyer (2008) describe knowledge work as "analytical activity requiring problem solving and abstract reasoning, particularly with (and through) advanced information technologies and particularly with and through acts of writing" (p. 414). In this description, Diehl et al. place special emphasis on activity that relies on digitally mediated experiences, situating knowledge workers as participants in complex ecosystems where writing in digital spaces mediates communication and work practices between participants. Within social web ecosystems such as *LBP*,

digital participants often form large communication networks that link multiple digital technologies. Through these networks, they produce images, videos, texts, or game levels, and then share their work with other participants in an effort to produce information and knowledge that further powers participatory activities.[27]

Within digital spaces such as the *LBP* ecosystem, this knowledge work is distributed across time and space. Participants are often in different geographic locations and different time zones. Such distribution of network participants requires a concerted and organized effort to participate with and learn from one another (Slattery, 2007; Spinuzzi, 2007). People, technologies, and texts are connected via net work. The ecosystems in which knowledge work takes place are "deeply interpenetrated, deeply rhizomatic," utilizing "multiple, multidirectional information flows" in order to exchange information among network actors, both human and non-human (p. 137). As rhizomes, these ecosystems feature many different, multidirectional pathways that are created between digital spaces, between people, and between tools. People, groups, and technologies can enter into the network at any point and at any time, and they can dismantle and reassemble the network into different configurations, pushing information simultaneously along multiple pathways.

The movement itself is crucial to the emergence and maintenance of both the network linkages and the information that moves along these connections. With the concept of a fire space, Law and Mol introduce the idea of *"the continuity of shape as an effect of discontinuity"* (p. 7; italics in original). A fire

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[27] In Chapter 3, this participant produced content is described as an *inscription*, or a tangible trace of production that carries with it markers of the creative practices that formed it.

space can become stable via the actor network's ability to reconfigure itself in response to local conditions. Stability is achieved through the network's adaptability and fluidity. Within fire space, movement and meaningful context are maintained "by allowing the network to reconfigure itself on the fly" (Potts & Jones, 2011, p. 341). Participants can introduce new connections across the ecosystem in order to generate information. Thus, the stability of the network depends on the ways in which participants can dismantle connections and then reassemble them, or how they assemble new actors into the network to alter how information flows. For this reason, movement can be used to describe the flow of information, the dynamic quality of actors' roles, and the re-configurability of network connections.

5.2.1 Encouraging Fire Space Through GetSatisfaction.com

Using various digital services, *LBP* participants can facilitate this movement. As described earlier, GetSatisfaction.com is a third-party service that is not affiliated with either Sony or Media Molecule. It is an independent service that provides forums to enhance customer service interactions between digital participants and company representatives. The site's "About" page describes it as a "friendly online environment to encourage people to answer each others' questions, pitch in to help solve problems, and share all kinds of new ideas about how to improve their product and processes" (2012). Companies subscribe to GetSatisfaction.com and pay a monthly fee (at least US$19) in order to interact with their customers. They do this by building online discussion boards that are

designed to highlight problems and potential ideas for improving customers' experiences with products. According to "The Company-Customer Pact" in Figure 5.1, the site's goal is "authentic communication" between customers and companies where in both recognize a "mutual responsibility" to alter the "adversarial tone that too often dominates the customer experience" (2012). These concepts are outlined in further detail in the "practical measures" that are described in Figure 5.1. The site's stated purpose, then, is to provide a forum in which representatives from companies such as Media Molecule can interact with customers and fans.

GetSatisfaction.com promotes itself as a discussion forum designed to encourage what the site describes as "trust": "We, customers and companies alike, need to trust the people with whom we do business" ("The Company-Customer Pact, 2012). GetSatisfaction.com is aimed at strengthening relationships between companies and consumers by fostering dialogue between these two camps. According to Green and Jenkins (2009), such a dialogue "requires trust" (p. 218) to better manage "the social expectations, emotional investments, and cultural transactions that create a shared understanding between all participants within an economic exchange" (p. 214). In Green and Jenkins's view, the dialogue that emerges between companies and consumers must be built on a respect of the consumer as a valuable and meaningful participant in cultural production. As an example, GetSatisifaction.com asks company representatives to monitor these forums and respond to the dialogue with participants in a constructive way (See Figure 5.1). The Company-Customer

Pact asks companies to view customers as participants with an investment in the companies' products. It also asks customers to be respectful and open to company representatives, and to understand that no company can oblige every customer or request. Thus, a tool such as GetSatisfaction.com enables participants to expand the actor networks in which they work so that they can coordinate with other participants to explore their current user experience of participation.

Figure 5.1. The Company-Customer Pact shown on the marketing site for the GetSatisfaction.com forum. The pact describes what basic social and discursive expectations that the site is trying to set for both companies and customers.

The Company–Customer Pact

We, customers and companies alike, need to trust the people with whom we do business. Customers expect honest, straightforward interactions where their voices are heard. Companies work to inspire brand loyalty and deliver satisfaction while trying to understand their customers better. It is evident that we all have a crucial stake—and responsibility—in transforming the adversarial tone that too often dominates the customer experience.

Along with open, authentic communication comes the mutual responsibility to make it work. As each of us is both a customer and an employee, we share in the rewards and challenges of candor.

By adopting these five practical measures, we can together realize a fundamental shift in our business relationships:

For Companies

Be Human
Use a respectful, conversational voice, avoid scripts and never use corporate doublespeak.

Be Personal
Encourage staff to use their real names and use a personal touch.

Be Ready
Anticipate that problems will occur and set clear, public expectations in advance for how you will address (and redress) issues.

Be Accountable
Make it easy to contact you and cultivate a public dialogue with customers to demonstrate your accountability.

Be Earnest
Demonstrate your good intentions by speaking plainly, earnestly and candidly with customers about problems that arise.

For Customers

Be Understanding
Show the respect and kindness to people inside the company that you'd like shown to you.

Be Yourself
Use a consistent identity and foster a long-term reputation with the company.

Be Helpful
Recognize that problems will occur and give companies the information and time required to competently address issues.

Be Fair
Share issues directly, or in a community where the company has an opportunity to respond, so it can work with you to solve problems.

Be Open
Give companies the benefit of the doubt and be open to what they have to say.

Media Molecule's description for the *LittleBigPlanet* forums on this site

states, "We'll be using GetSatisfaction to gather your problems, questions, ideas

and comments about LittleBigPlanet 2 and our websites LittleBigPlanet.com and

LBP.me – we'll respond and absorb whenever we can!" The company has

explicitly defined their GetSatisfaction.com forum as a place for participants to

post requests, ideas for changing or improving the *LBP* experience, and to report

the technological and social problems that they encounter. As this chapter will

illustrate, these posts can include outlines of new interactive features that

participants want to use within the community, as well as discussions about

moderation and potential software glitches that hamper the user experience.

These features include ways for the participants themselves to moderate

comments on their game levels, both within the game and on other Media

Molecule websites. GetSatisfaction.com expands this ecosystem by adding a

new space in which the contexts for interaction among participants are explicitly

defined as a supportive knowledge work that highlights and helps resolve

problems.

GetSatisfaction.com promotes itself as what Rude (2009) describes as an

"agent of knowledge making, action, and change" aimed at altering the discursive

and social interactions that emerge within a specific socio-cultural context (p.

176). Media Molecule uses GetSatisfaction.com as a social tool to interact with

customers. Participants take advantage of these connections to re-articulate the

actor network of moderation. Through new connections and reshaping existing

ones, participants extrapolate information from the Sony and Media Molecule

about the moderation process, and they can argue the need to re-shape that

process's implementation through the Good Grief! System.

Indeed, Figure 5.2 shows that company representatives point participants

in other forums to GetSatisfaction.com in order to request features, report

problems with the game, and find further support. In this case, Media Molecule's

Community Coordinator, Stephen Isbell, is informing participants that they can

find more information about a particular in-game glitch within a

GetSatisfaction.com discussion thread. As a company representative that is an

official coordinator, he links the two forums together in order to promote

information that is relevant to the community's questions about the glitch that

many have encountered.

Figure 5.2. Forum post in LittleBigPlanet.com by Steven Isbell, the Community Coordinator for Media Molecule. In his post, he is directing participants to GetSatisfaction.com for further information regarding an in-game glitch.

This coordinative work is an example of the "deeply rhizomatic" movement of content (Spinuzzi, 2008, p. 137). Company representatives are constructing digital tunnels between content spaces, linking one general forum to another, more specifically defined forum. These tunnels are multiple and multidirectional, weaving pathways across digital spaces that allow participants and information to move throughout the ecosystem. By connecting Media Molecule's GetSatisfaction.com forum to other sites in the *LBP* ecosystem, Isbell is transforming the infrastructure that supports the participatory community. He is not creating a new digital technology or redesigning an existing one. Instead, he is creating a pathway between pieces of existing information in order to help participants generate new knowledge for the *LBP* community. These types of activities mediate participation within the ecosystem so that actors—including participants—can "come together at almost any point, generating new sorts of expertise, and arguably, new realities" (p. 193). Forging links brings participants together through the movement of people and information from one space to another, from one participant to another. In this movement, participants are able to construct dynamic meaningful contexts around the content that they produce. By linking GetSatisfaction.com to the LittleBigPlanet.com forums, Isbell injects new information and meaning into both forums, encouraging participants to produce new knowledge and resolve the problems they have encountered with a particular glitch.

Isbell's example illustrates that Media Molecule representatives are encouraging participatory problem solving that requires the coordination of

information across the *LBP* ecosystem. The net work that participants must perform to support these efforts is enabled through fire space, something that Isbell's actions also demonstrate through the linkages that he encourages. Exploring net work and fire space as a crucial element of the user experience of participation is an important line of inquiry for researchers and designers moving forward. This provides us a framework for understanding information movement and its significance to participatory cultures. The next section turns this attention towards the ways that participants themselves net work in order to produce fire space that generates knowledge. The generative networks that they weave illustrate how this activity emerges and is sustained across time and space. As this chapter demonstrates in the next sections, these participants strengthen their participatory roles and rhetorical positions—crucial capabilities for network participants (Spinuzzi, 2008) in complex information ecosystems.

5.3 PARTICIPATING ACROSS THE ECOSYSTEM

Participants leverage the tools available within GetSatisfaction.com by posing questions and interacting with representatives from Media Molecule. The company defines this digital space as one for in which company representatives and *LBP* participants can share information and discuss potential ways of solving documented problems. As this chapter shows, participants and Media Molecule are collaboratively seeking solutions to sociotechnical problems, or problems where technological design intersects with social and cultural practices. Through this coordinated effort, participants are able to generate information that would

otherwise be difficult to find, empowering them as network actors and as participants within the digital ecosystem.

5.3.1 Participatory Control

One example of such coordinated efforts among participants is that of Harry Bellis, a participant who posts a new discussion thread sometime in August 2011.[28] This participant suggests ways in which player-creators should be able to moderate comments posted to their levels and their LBP.me pages. Figure 5.3 is a screencapture of Harry Bellis's post that shows the text of his original forum post, as well as some key features of the GetSatisfaction.com user interface (UI). In his post, Harry Bellis suggests several features that allow player-creators to turn commenting off and on for their levels, as well as delete comments from other participants. When logged into play *LittleBigPlanet* through the Playstation Network, participants can post comments on the levels that they play and they can tag those levels with keywords. As he states in his post, Harry Bellis (2011) is arguing for these features because "some like to abuse these systems for their own amusement, bullying of others, etc." He suggests that extending this level of control to *LBP* participants "would not only give us piece of mind about how our comment/review sections are used, but also majorly reduce LittleBigPlanet's current spamming, trolling, bullying problem in these areas." Harry Bellis argues that allowing participants direct control of the conversations around the content

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[28] An exact date is difficult to know because GetSatisfaction.com presents the date of Harry Bellis's post as "9 months ago." Calculating backwards from the time I captured the image in Figure 5.2 brings us to August of 2011.

that they produce would allow the participatory community to better moderate itself.

Figure 5.3. Harry Bellis's post outlining features that he argues would help resolve potential problems stemming from abuse of the commenting systems in *LittleBigPlanet* and LBP.me.

Satisfaction

Log in or Sign up | Find products and companies

Community-powered support for

LittleBigPlanet

Community ▸ Topics ▸ Ideas

Search Topics

Harry Bellis 9 months ago

Under consideration

Create a new topic

Basic Moderation Tools for Authors on their Profile/Levels

I'm seriously hoping this gets implemented

LBP2 brings a greater aspect of social networking into the game, what with Profile comments, review sections etc. and a great recent activity section to keep track of any updates. It's great to be able to chat nicely with others, either one on one or with a group of others.

Sadly though, not everyone is nice, and some like to abuse these systems for their own amusement, bullying of others, etc. I've had a lot of experience of mixed types of use, and slowly more and more people have began to abuse it. A key factor of this is because there is nothing the owner of the comment/review section can really do about it, other than deleting the abusive text, or Grief Reporting it and hoping for the best.

Though past all this, some people simply are not the sociable type, and would rather have these sections disabled all together, which is understandable. This is why I suggest basic moderation tools be implimented for us to use in our comment/review sections to keep things at bay, such as spamming and abuse, or keeping people away all together. This would not only give us piece of mind about how our comment/review sections are used, but also majorily reduce LittleBigPlanet's current spamming, trolling, bullying problem in these areas.

Idea's of things to include:

>Moderation Tools: A Button in your levels comments/review section and profile comment section titled 'Moderation Tools' or something similar for you to access it all.

>Hard Delete: When deleting a comment or review, it is replaced with "This comment/review has been deleted by the player/author/level autor". The ability to actually delete it completly, so it was like it was never there would be great (or at least hide it from public view, so Official Moderators can still see it). When selected, you return to the section you were in, with checkboxes next to the comments/reviews. Select the ones you wish to delete, then confirm. they will all be removed.

>Block List: If people are constantly harassing you, you should be able to add them to an in-game block list, which will therefore prevent them for posting in your level's or profile sections, even if other people can post there.

>Enable/Disable Profile Comments/Level Reviews/Level Comments Section: If enabled, people can post in these (or better, in selected sections only). If disabled, the ability to post new comments/reviews is removed for everyone, other than yourself (so you could use comment sections as status update areas etc.)

>Enable/Disable Profile Comments/Level Reviews/Level Comments YAY/BOO system: Enable or Disable YAYing or BOOing comments/reviews. People seem to abuse this system too in odd way's

Grief Report: Like on lbp.me, a button next to every comment and review titled "Grief Report" to report any offensive text to Sony Moderation. This would be better than taking screenshots of the text. This option should be available to everyone, not just the profile/level owner.

Anything else to add which I forgot, or existing things here to edit which I was silly not to do for you would also be great!

Hope to see some sort of moderation tools come out for us happy gadders in the near future. :)

33   +1   follow

ABOUT THIS IDEA

94 REPLIES

Tweet   **2** PROMOTED RESPONSES

Link   **20** PEOPLE PARTICIPATING

PRODUCTS & SERVICES

LBP.me   LittleBigPlanet 2

+

TAGGED

abuse   comments   idea

media   mod   moderation

molecule   qa   reviews

section   spam   spamming

text   tools   trolling   trolls

sony   v112

+

THE MOOD IN HERE

😊 ▬▬▬▬▬▬ 5
😐 ▬▬▬▬ 2
😕 ▬▬▬ 1
☹ ▬▬▬ 2

Like this change was made to this topic

Reply

In this case, a participant in the *LBP* ecosystem is requesting a feature that allows player-creators a measure of control over the conversations that form around the content that they share through certain parts of the ecosystem. Participants can leave comments on the game levels that they play, and they can leave comments on the LBP.me pages for those levels, as well.[29] Such integration ties these two digital spaces tightly together. Interacting with a level in *LittleBigPlanet 2* directly attaches data to that level in LBP.me, and vice versa. Thus, comments by participants in one space automatically move to the other, as well, becoming examples of digital texts that "move across space and time" (Geisler et. al., 2001, p. 280). As Geisler et. al. discussed, this movement is a key element of digital texts, allowing them to transition into many different spaces to support multiple activities. Potts & Jones (2011) highlight this movement as critical component of constructing and maintaining meaningful contexts for social web participants. Within the *LBP* ecosystem, the movement of both participants and information is critical to the knowledge work that supports creative and social practices. The integration between *LittleBigPlanet 2* and LBP.me automates some of this movement for participants. As illustrated by examples in previous chapters, participants can also inscribe content in different ways so that they can move it—or at least traces of it—from one digital space to the next. Most often,

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[29] As discussed in Chapter 4, LBP.me is a website owned and maintained by Media Molecule that links directly to player-creators' data in *LittleBigPlanet*. Though participants cannot play games there, they can perform other relevant tasks that are common within the *LBP* ecosystem. They can rate player-produced game levels and leave comments on them. Player-creators can also take screencaptures using a tool within *LittleBigPlanet 2* that then automatically exports those static images to the player-creator's LBP.me page. And using LBP.me, participants can also add levels to a queue that is then accessed through *LittleBigPlanet 2* so that they can immediately jump into levels that they want to play without browsing or searching through the game itself.

they do this by capturing digital still screenshots of dynamic in-game content in order to post it to discussion forums.

By asking for a level of control over participant-generated comments, Harry Bellis is also requesting some measure of control over how those comments move within the ecosystem, fearing that verbal abuse (often referred to by internet participants as *trolling*) left in comments will spread. The participant is arguing for a more localized control over commenting within the ecosystem by suggesting that "some people simply are not the sociable type, and would rather have these sections disabled all together, which is understandable." The ideas that Harry Bellis puts forward within his post are aimed at giving participants control over their participatory experience in order to coordinate the movement of texts in a way that is useful and acceptable to them.

One way of understanding Bellis's suggestions is that they are requests for features that support net work among participants. These features would entrust participants to police the network more thoroughly themselves without turning automatically to the Good Grief! System described in Chapter 4.[30] Thus, more explicit coordinative work among participants would be necessary for this participatory activity to take place and be effective. Such features can simultaneously stoke the fire space for participation while also enabling participants to at least partially control the fire space's intensity.

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[30] The Good Grief! System is the tool that Sony and Media Molecule use to monitor and moderate player-created content within *LittleBigPlanet*. The tool also extends out to the LBP.me page, and is used in the same way that is described in Chapter 4. Here, Harry Bellis is asking for a stronger participatory ability within the moderation process, allowing player-creators to police comments on their own content.

5.3.2 Linking Spaces and Moving Information

As Potts (2009c) states, participants in social web ecosystems "are actively moving among sites, gathering information and turning that information into knowledge as they share it with others" (p. 284). Participants forge their own links across the ecosystem. In doing so, they use those links to support the movement of information and produce fire space. For instance, in response to Harry Bellis's requests for moderation tools that allow player-creators to control comments, another forum participant named Shadowriver posts a link to a Twitter update with the statement that "one thing just been confirmed." His link is to a Twitter post from a Media Molecule representative who states that the company is implementing a feature similar to one of Harry Bellis's requests. As Figure 5.4 illustrates, the URL in Shadowriver's response is automatically converted to a clickable link that other participants can follow to its destination. The participant is collecting information from a different social web tool in order to move that information across the ecosystem and better inform other community members. GetSatisfaction.com's ability to automatically convert the URL into a clickable link empowers this movement.

Figure 5.4. Shadowriver's response to Harry Bellis posted to GetSatisfaction.com, linking to a relevant Twitter update.

Promoted Responses

Shadowriver 4 months ago

Well Hazbell it's your lucky day, one thing been just confirmed

https://twitter.com/#!/thespaff/statu...

No info how far it goes

☆ 3

The Twitter update that Shadowriver highlights is from James Spafford, a Community Manager for Media Molecule. Spafford's Twitter post (shown in Figure 5.5 and dated January 6, 2012) states that Media Molecule is implementing at least one feature similar to Harry Bellis's requests within *LittleBigPlanet 2*. According to Spafford's update, this feature will allow participants to turn commenting functionality on and off within their game levels. Spafford does not elaborate any further in his tweet. However, this is an example in which "layer upon layer of conversation" (Ramaswami, 2008) grows throughout the *LBP* ecosystem. Shadowriver's efforts connect different parts of that conversation together. Surveying 260 of the 2624 active discussion threads on GetSatisfaction.com's boards as of August 2012 revealed that 19% of those threads contained embedded links to external networks and systems. These links posted to blogs, news articles, official updates from Sony's and Media Molecule's websites, and social media systems such as YouTube and Twitter. This activity is not typical of every thread, but it is a common practice within the *LBP* community.

Participants can merge pieces from different spaces across the ecosystem into a more coherent discourse. These exchanges allow them to construct stronger knowledge of how they can participate within *LittleBigPlanet 2*.

Figure 5.5. James Spafford's Twitter update indicating that Media Molecule plans to implement a feature that allows player-creators to moderate comments on their levels.
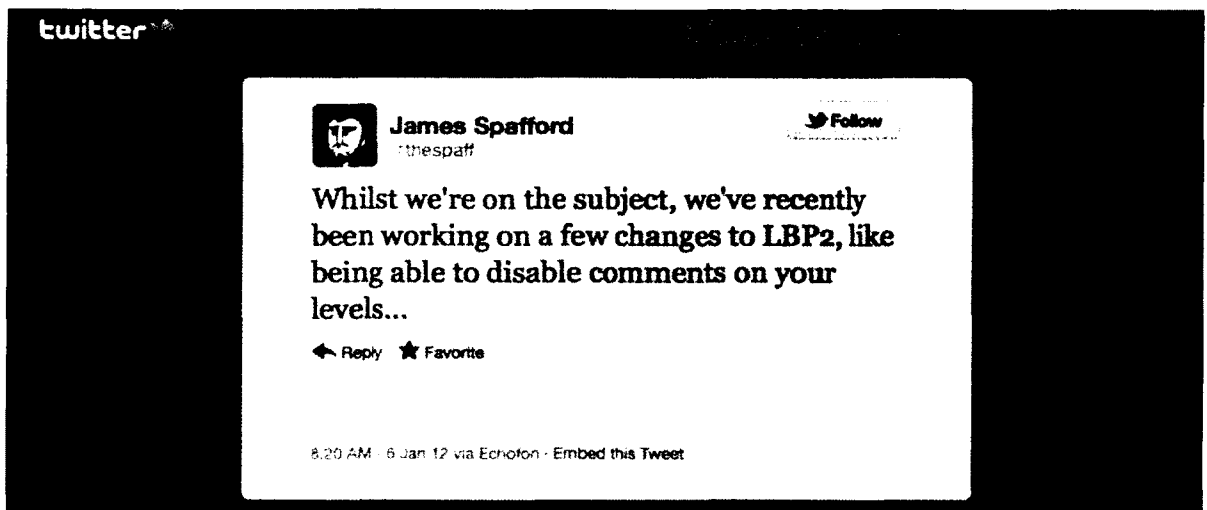
The movement of information across the ecosystem is such a vital component of participation in this instance that Shadowriver posts his response approximately five months after Harry Bellis's initial suggestions. Shadowriver followed the information concerning the player-controlled moderation of content closely enough that he could make a connection between a tweet from Spafford and Harry Bellis's requests months after the initial post. As Figure 5.3 illustrates, Bellis's post has also been marked by Media Molecule representatives as "Under Consideration." Tying the GetSatisfaction.com and the Twitter post together

helps participants gain greater clarity around Media Molecule's response to these requests. The community's collective tracing and linking of information across digital spaces allows the community to generate knowledge about a participatory activity—in this case, the moderation process. Like the participants tracing digital tools and creative strategies in Chapter 3, these participants are using similar techniques to illuminate—and even change—the scope of their discursive control within the *LBP* ecosystem.

In addition, Shadowriver's post has become a "Promoted Response." Other participants can promote responses via a user interface feature in the forums that allows them to flag responses as a "good point." If enough participants promote a specific response, then a copy of the response moves to the top of the forum thread directly underneath the first post. The response also remains in its original spot within the thread. This way, information is moved to the top while the chain of dialogue surrounding that information remains intact. This way, information is both highlighted while meaningful context is preserved. In Shadowriver's case, his post has been promoted at least three times by other participants within the forums. This is not an impressively high number, but the action does indicate that others are trying to elevate his comment so that it can be more easily seen. The community itself can both move information across the ecosystem and elevate that information in order to bring it to others' attention.

Tracing this movement enables researchers to situate net work as a cultural practice, better understanding the ways that individual participants assemble through digital technologies to generate knowledge and sustain their

network connections. Because participatory practices are situated within cultural contexts, understanding such contexts can help researchers better trace the purpose and meaning of participatory activity. It can also help designers account for culturally rich interactions among participants in the design of applications within these ecosystems. Designers can better support culturally situated communication and knowledge work among participants. For designers armed with this insight, designing social web applications shifts to understanding communication across these ecosystems and designing for movement within fire space. We can begin situating potential design solutions within knowledge of the ways that movement is significant to participatory cultures and the individuals that work across such ecosystems.

5.4 MAPPING MOVEMENT

As the last section illustrated, connecting these systems through participatory activity enables the movement of people and information across the *LBP* ecosystem. The coordination that occurs within net work is an active attempt to both process information into new relevant knowledge and to sustain participants' abilities to participate within the community. For this reason, generative networks enable the movement and coordination of information and participatory activities within the social web ecosystem. This movement helps participants form meaningful contexts and produce knowledge that is relevant to their communities. By mapping this movement, researchers and designers can visualize the ways that people and technologies in the social web assemble

around problems or questions that are relevant to their communities to produce resolutions. The connections formed through participants' net work are vital for creating and sustaining fire space that is so important to the generative network.

Figure 5.6 maps the connections formed between these systems against the reductive actor explored in Chapter 4. Harry Bellis's requests and Spafford's indicate a direct alteration of the way moderation occurs within the ecosystem, allowing participants to forego the Good Grief! System and police comments left on their own content. In effect, GetSatisfaction.com, Twitter, and LittleBigPlanet.com are arrayed as technological actors around the Good Grief! System and the moderation process that is enclosed within that system's design. In doing so, participants are connecting these tools together in order to pry information from the reductive actor and change the way it is implemented within the ecosystem.

Figure 5.6 An example of a generative network that participants construct around the moderation process. In doing so, they can trace information and generate knowledge about the process or how to change it.
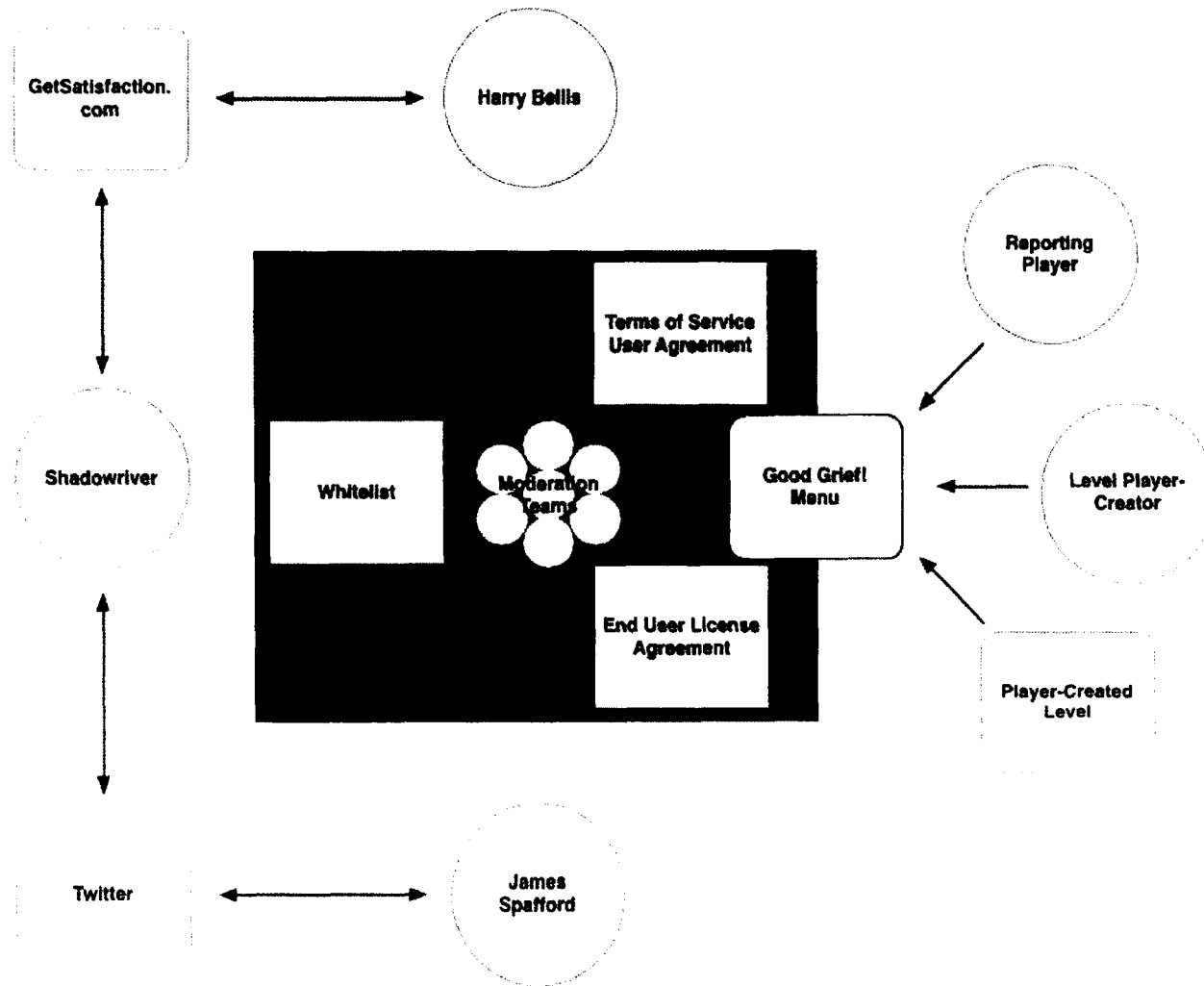
These connections support an assemblage of participants that can be described as a "spliced settlement" in which linkages among participants "can quickly unravel and just as quickly reform" (Spinuzzi, 2008, p. 137). Connections among technologies and among participants are tactical and contingent—they appear rapidly, can endure for either short or long periods of time, and can disappear just as rapidly. As long as there is movement[31] by participants or by information, then these connections endure as active lines along which participation occurs within the community. Through this active participation, Harry Bellis, Shadowriver, and others can produce information that sheds light on the moderation process, potentially problematizing some of its procedures and implementation. They rely on the direct connections that link the *LittleBigPlanet* GetSatisfaction.com page and James Spafford with Media Molecule. Through these connections, participants can learn about the moderation process and communicate their requests for more participatory control. Connecting Spafford's Tweet to Harry Bellis's GetSatisfaction.com post enables participants to effectively coordinate information that is distributed across the *LBP* ecosystem. Shadowriver brings official news back to the participatory space in which player-creators are discussing ways of personally moderating how conversations happen around their own levels.

In the case study traced in Chapter 4, I illustrated how the moderation process enacted through the Good Grief! System combines an ability to hide the

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[31] *Movement* is discussed earlier in this chapter as the flow of information, the dynamic quality of actors' roles, and the re-configurability of network connections. It points to the ways that information and people shift across the digital ecosystem from one space to the next, as well as the ways those actors change in response to local conditions within each digital space.

ways that policies are interpreted and applied by Media Molecule representatives with a single interface through which participants feed information into that process.[32] This combination forms what I term a *reductive actor*, or a network actor that reduces participants' ability to trace and understand the boundaries of participation within a social web ecosystem. In the case of the *LBP* ecosystem, the reductive actor—the Good Grief! System—hid how and why moderators interpret and implement policies that restrict participatory activities, such as the use of copyrighted intellectual property.[33] In effect, the reductive actor works to disable the movement of relevant information among participants and social web tools. By hiding elements of the actor network within a black box and restricting access to it, participants experience the reductive actor as a static monolith through which information does not pass. Information only enters into the black box and disappears.

In a generative network, the user experience of participation is kinetic as participants trace information through an array of people and social web tools. They then move that information across the ecosystem in order to repurpose it and produce new knowledge that is important to the community in which they work and play. Participation is an active experience, even if the participant never produces a game level within *LittleBigPlanet* or *LittleBigPlanet 2*. Participants must move within the ecosystem to find and assemble information that is

[32] In that chapter, I describe this combination of characteristics using actor network theory's concepts of the *black box* and the *obligatory passage point*, respectively. When these two qualities are present within a system, their combined effects can distance participants from the ways that processes are performed or the ways that network actors are linked.

[33] In Chapter 3, I traced the ways that participants in the *LBP* ecosystem leverage copyrighted intellectual property (IP) as a tool for assessing each other's creative skill sets. Thus, this IP is a critical cultural tool for expanding participants' creative and communicative skills.

important for their digital experiences within the community. For player-creators, the ability to move within the digital space is critical to their participatory practices and the knowledge work that they perform. By coordinating activities and technologies through net work, participants such as Shadowriver and Harry Bellis leverage this movement as a way of arguing for changes to the moderation process and then tracking down the announcement that such changes are taking place. The fire space produced by linking GetSatisfaction.com and Twitter enables negotiation over the participatory boundaries within the *LBP* ecosystem.

For scholars and industry practitioners, the concept of fire space is important to tracing how and why participation is kinetic. By situating movement at the center of the user experience of participation, we can better understanding both how and why participatory cultures leverage social web tools to form digital ecosystems. The rhizomatic quality of digital networks described by Spinuzzi (2008) enables participants to push information along multiple channels to many different participants. Working within an ecosystem is not a linear experience for participants. Though they may be able to access any digital tool or space that makes up that ecosystem, they cannot inhabit all of them at once. The participant moves from space to space, hunting for information that they share with other community members. In the case of *LBP*, the ecosystem is spread across systems and tools that do not always directly link to one another, such as Twitter, GetSatisfaction.com, and the Playstation Network. The ability to move is vital for participants working across the ecosystem to track down crucial pieces of

information so that they can then assemble those pieces into participatory

knowledge.

The rhizomatic quality means that information and people "may not be

stable from one incident to the next," and they "may not follow predictable or

circumscribed paths" (Spinuzzi, 2008, p. 137). As a rhizomatic space, movement

is not only occurring along different lines of connection and in different parts of

the ecosystem, but at different times, as well. As Law and Mol (2003) state, the

actors in a network must put forth considerable "effort, work, to maintain a stable

configuration" (p. 3). The rhizomatic quality of these networks is one way in which

this effort manifests as a social behavior among community members—what Law

and Mol describe as the "continuity of shape as an effect of discontinuity" (p. 7).

The ability to create different, multiple pathways, even temporary and ephemeral

pathways, enables participants to move within digital space and information. By

creating linkages among these the systems that support this information,

participants enable information to move in multiple, unpredictable ways, as well.

This combined movement empowers participatory cultures to produce shared

experiences from which they forge meaningful interactions among one another.

Within these interactions, participants collectively create new knowledge for the

community.[34]

For instance, in Harry Bellis's original GetSatisfaction.com post

documented in Figure 5.2, the discussion that follows that post stretches across

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[34] The case studies in this dissertation (Chapters 3, 4, and 5) trace the different ways these interactions occur within the *LBP* ecosystem by exploring both the activities performed by people and organizations and the structure of the relationships they use to link themselves together into an actor network.

months with long periods of inactivity in between comments. Though the dates

for these comments are inexact, some show as much as two months elapsing

between comments. Shadowriver tracked down James Spafford's tweet

approximately four months after Harry Bellis's initial requests. These participants

are forging connections among systems and information with significant periods

of time elapsed in between events. For researchers and designers, this suggests

that while networks themselves may be dynamic and contingent, the inscriptions

that participants produce should persist, allowing them to easily find and move

content. In this way, we can support fire space as a critical element of the user

experience of participation.

Participatory communities are often constructing multiple contexts and

working to create many different meaningful experiences within different corners

of the digital ecosystem. In addition, activity can rapidly emerge within these

different corners and then just as rapidly go dormant for periods of time, only to

re-activate at a later date. Designing and building digital infrastructure to support

such ecosystems must situate movement as both a spatial and a temporal

element of the user experience of participation.[35]

5.5 MOVEMENT SUPPORTING TRANSFORMATION

As this chapter demonstrates, the generative network depends upon

movement produced through fire space. This movement helps create and

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[35] For researchers and designers, this highlights two important realizations that are discussed further Chapter 6. The first is that understanding a culture is an ongoing task for researchers. Both scholars and industry experts studying UX will need to invest in ethnographic approaches that engage with audiences long after a digital product is released to a market or a new tool is implemented. The second is that net work happens across space and time.

maintain meaningful context for participatory activities within social web ecosystems (Potts & Jones, 2011). In the case study presented here, participants such as Harry Bellis and Shadowriver collaboratively collect information from across the social web to generate both information about the moderation process and a way to change at least a part of it. Researching network activity and the ways in which participants generate meaning through their connections to technology and to one another is a matter of tracing such movement. By exploring these activities, researchers and designers develop a stronger understanding of the ways that such movement empowers participants to collaboratively construct knowledge. In turn, scholars and industry practitioners can move beyond the design of single applications to designing ecosystems that situate the user experience of participation within the cultural practices of online communities.

According to Latour (2005), the linkages and the social experiences that occur within networks are indicative of "a movement, a displacement, a transformation, a translation, an enrollment" (pp. 64-65). Latour suggests that what researchers and scholars term "social" is better understood as an enacted set of linkages between actors that foster change within the network. The case study in this chapter does not trace a direct causal relationship between Harry Bellis's requests and James Spafford's Twitter update. Instead, participants are actively requesting change and coordinating their efforts to seek out information about the ecosystem's boundaries and its status. As stated earlier in this chapter, participation is a kinetic experience wherein participants actively seek disparate

bits of data to assemble it into information. The movement itself sustains the production of meaningful contexts for participants, enabling them to generate knowledge by continuously assembling and disassembling both nodes of information and the contexts in which it is interpreted. For this reason, the network is marked by change among actors that emerges from the ways that these linkages are forged and change over time.

Producing fire space in such an ecosystem is, thus, a rhetorical act, demanding that participants become "strong rhetors" who "understand how to make arguments, how to persuade, how to build trust and stable alliances, how to negotiate and bargain and horse-trade across boundaries" (Spinuzzi, 2008, p. 201). Participating within the ecosystem is not just an act of creation or production in which player-creators generate content and share it. Player-creators can stake a claim to their activities and argue in support of practices that empower them as cultural participants. Harry Bellis uses the GetSatisfaction.com forum to request a higher degree of control for participants to moderate comments on their own game levels. He is asserting that it is important to the culture to be able to police itself while individuals establish and enforce their own expectations of participation around the content that they produce and share. Harry Bellis's argument situates the moderation process traced throughout this dissertation within the participatory culture in which he takes part.

In the coordinative net work that participants perform, they are not just coordinating information. They are also coordinating their skills by mediating their work through these digital systems. The link and comment that Shadowriver

leaves on the original post is a trace of his efforts exploring other social web systems and tracking information from Media Molecule representatives. Through such activities, participants such as Shadowriver are no longer passive consumers of a product, or even just player-creators using *LittleBigPlanet* or *LittleBigPlanet 2* to produce content. These efforts, spread across time and space, indicate that Shadowriver takes an active interest in Harry Bellis's ideas and Media Molecule's response. By linking the two together, he is actively seeking data to learn from and develop information. Shadowriver wants to help build meaningful context for others within the discussion thread and produce knowledge that is critical to participation.

The user experience of participation in such spaces, then, is one of transition and change, much of it initiated by the participants themselves. Their rhetoric argues for deeper control over the ways that participation is defined within the ecosystem through the technologies that link participants together. Their activities tacitly indicate a detailed knowledge of many of those technologies that support their efforts to effectively trace, coordinate, and contextualize information. In such a kinetic ecosystem, participants rely on fire space to effectively pursue such activities and develop both their participatory knowledge and skills. Supporting the movement of information and participants throughout the fire space is a critical challenge for both researchers and designers, particularly within digital ecosystems wherein participation enlists third-party social web platforms and proprietary technologies. By situating participatory activity within the cultural practices of online communities,

researchers and designers can develop not just a better understanding of these

cultures but also a richer knowledge of how to design applications and

ecosystems that support their activities.

CHAPTER 6

THE USER EXPERIENCE OF PARTICIPATION: EXPLORING MOVEMENT AND TRANSFORMATION

6.1 INTRODUCTION

In wrapping up this dissertation I want to draw from the insights of the case studies in this dissertation to posit a way forward for scholars and industry practitioners. More specifically, my goal for this dissertation is to offer a research and design methodology that addresses the user experience of participation. The research that I have presented in these case studies focuses on participatory activities situated within ecosystems of information, technologies, and social and creative practices. In doing so, I have been able to describe how meaning emerges from these activities and the ways that participants leverage technologies to support their knowledge work. Such insight is important groundwork on which further design iteration can be based. If we are to support participation as an exercise in collaborative knowledge work, understanding the use of technology as a culturally situated experience is a must. Within such knowledge, researchers and designers can better understand the parameters and requirements that should define how technologies are created and implemented in a more holistic fashion. We can architect ecosystems that can adapt and support knowledge work based on cultural use. This means expanding the scope of the designer's view from just systems and interfaces to connections across digital spaces, the policies that govern technologies, and the cultures in which these systems are used.

Participating in the social web often means blending digital technologies with the communication practices of people and communities in rich, complex, and sometimes hidden ways. As Fischer (2011) states, "cultures of participation are not dictated by technology; they are the result of changes in human behavior and social organization" in which participants' activities repurpose existing systems, and even sometimes create their own, for the purpose of social collaboration (p. 42). Learning how and why participants leverage digital technologies and the content that they produce, repurpose, and share is critical to the research and design of digital ecosystems. In this research, scholars and industry practitioners alike can develop a richer understanding of how information and people move from one technology to another, from one context to the next. No longer can we be satisfied with researching the design of single applications used by people in narrowly defined tasks. We must explore how and why technologies are stitched together by communities to perform collective activities, support individual and community goals, and develop more richly textured knowledge.

Social web architectures are extremely dynamic, requiring technologies to have the ability to support activities as participants move across digital space. The linkages among these actors form this infrastructure by providing the pathways across which information and participants move (Swarts, 2010). Such networks are enacted through social and creative practices. The user experience of the social web is contingent, then, upon the movement of people and content. Designing social web interactions is not a matter of creating a single usable

interface or system. It is a matter of designing for interactions and practices that take place within complex relationships between people, groups, and technologies. These interactions and practices are made socially and creatively meaningful within cultural contexts that can be traced and understood.

To explore the user experience of participation, throughout this dissertation I have focused on three central research questions. Table 6.1 maps each of these research questions to three key components of the user experience of participation. Each of these components forms the core of the respective case study.

Table 6.1. The research questions of this dissertation mapped to each chapter and the focus of each case study.

Chapter	Research Question	Case Study Focus
Chapter 3	What creative and social practices are important for people within *LittleBigPlanet* communities, and how do these practices support their knowledge work?	Local innovations and the cultural needs that drive participatory activity, alongside the ways that policies are presented and implemented to govern participants' social and creative practices.
Chapter 4	How does the design of technology and policy intersect with such creative and social practices?	The ways that such policies are implemented through the design of process and technologies, and the ways that such procedures and systems attempt to govern participation.
Chapter 5	What strategies do participants use to trace that intersection, and why do they do so?	How participants reshape their relationships to other actors in the assemblage so that information moves throughout the ecosystem, allowing them to forge a stronger knowledge of participatory boundaries.

Each case study focuses on a type of movement, either of participants or information. Specifically, these cases explore the ways in which participants and information move through digital ecosystems. Chapter 3 illustrated how and why participants recreate and move copyrighted intellectual properties across digital systems to support knowledge work. Chapter 4 outlined the ways in which Media Molecule and Sony seek to regulate this movement through technological design and implementation of people-powered moderation processes. Chapter 5 explored how participants respond to such systems and processes in the ecosystem, restructuring the technical and social networks in which they work and play. The ecosystem is a dynamic space that responds to the ways that participants and companies work through these tools. Within social web experiences, meaningful "context emerges because of movement, rather than in spite of it," because such contexts are "stabilized through the work of the community" (Potts & Jones, 2011, p. 341). This work takes many different forms wherein some type of movement becomes integral to cultural practices of these communities. The actors in these ecosystems—both human and non-human—can be transformed and repurposed.

Because these architectures are emergent cultural spaces that leverage technological infrastructures, the goal of researchers and designers should be at least two-fold.

1. Trace and understand how movement happens and why it is important to participatory cultures. Why do people shift from one digital system to the next, collecting and re-purposing information to transport it to other

participants situated in other corners of the ecosystem? How and why are participants, companies, technologies, and processes transformed as a result?

2. Design infrastructures that support this movement through adaptive, contextually aware ecosystems of digital tools and processes. What types of content are they sharing and how? How are they producing this content? How can participants adapt different systems to widely different communication contexts?

It is important to note that each goal is premised on different questions. The first goal is aimed at identifying practices and establishing *why* they are important to participants and the communities in which they work. The second goal is aimed at understanding *how* digital systems can and should support participatory activities in contextually-aware ways. Combined, these two goals can help researchers and designers better understand the mechanics of movement for these cultures, which then informs how we can provide user experiences that help participants better link digital tools and spaces. It is crucial, therefore, for those of us researching participatory communities using digital technologies to focus on the ways that localized moments of invention intersect with wider ecosystems. When participants create new content and share it, we must learn why they do so. We must understand what drives these local moments and helps them become meaningful, the ways that participants coordinate their work across digital space, and how participants re-purpose technologies or even create them to support their work.

6.2 THE IMPORTANCE OF MOVEMENT

The user experience of participation that I have traced throughout this dissertation is marked by constant negotiation between participants and the owners of proprietary technologies and intellectual property. Within such ecosystems, an assemblage of people, groups, organizations, and technologies perform knowledge work that both enacts participatory practice and defines the scope and boundaries of such practice. Participants create digital content and collaborate to produce information through social networking services. More importantly, these participants also collaboratively define participation as a culturally important experience, establishing its purpose within their communities. Yet, what constitutes participation will not be the same for every culture in every space. Thus, designers and architects are better served to ask why participants in specific cultures perform certain activities before asking what tools they need or how to build those tools.

Thus, defining participation as it relates to these cultures is crucial for scholars studying the social web and designers seeking to create new products and technologies. This is just as true of participants and organizations as it is for researchers and designers, as well. Within assemblages of people, technologies, and groups, individuals and organizations seek to define participation, both through technological design and through their activities. Thus, such definitions depend on the ways that actors (both people and technologies) are linked through social and creative activities. These relationships are marked by the

ways that people, organizations, and technologies are connected to one another through digital infrastructures and participatory activities. The linkages that they form, the creative practices that they pursue, and the social activities in which they engage are all aimed, at least in part, at defining what participation is within their social web experiences.

To research these networks and the culturally situated meaning that is embedded there, scholars and designers must explore two types of movement within these ecosystems.

- Movement of participants: How and why do participants move across digital spaces? How and why do they link multiple spaces together? How do they transform such spaces through this movement?

- Movement of information: How and why do participants move information across those spaces? In what ways do they transform that information to suit new contexts, purposes, and needs?

These types of movement give rise to network relationships. Exploring and understanding the mechanics of these linkages is vital for the design of participatory user experiences moving forward. Many texts discuss the need to leave the design of social networking technologies "unfinished" so that participants can adapt them to their own social and creative needs (cf. Crumlish & Malone, 2009; Fischer, 2011). By exploring movement through the mechanics of network relationships, scholars and industry practitioners can support the iterative refinement of these technologies as they must adapt to new participatory practices and culturally-situated purposes of participants.

As participants' social and creative practices drive the emergence of these networks, so does their need to understand how they can participate and why such connections exist. Participants often work within boundaries set by the design of digital technologies, processes, policies, and, most importantly, their own culturally situated practices. As such, the boundaries of participation—the limits defined by companies such as Sony and Media Molecule—are often in flux. They shift as both participatory and organizational needs shift, and especially as participants leverage social web technologies to support their knowledge work. Throughout this dissertation, this tension has been traced through the ways that participants leverage copyrighted content versus the ways that policies are designed and implemented within the ecosystem. It is vital to the future research and design of digital ecosystems that scholars and industry practitioners alike explore the ways that design, process, policy, and cultural practice intersect. Participation within the social web demands that people have the ability to explore such intersections. They do so in order to better understand how to use digital tools to support their participatory activities. They collectively produce knowledge that is important to their communities. And they work to understand where the boundaries of participation may be found, and often seek to challenge those boundaries. As this dissertation illustrates, it is also sometimes vital that they have the ability to negotiate where and how those boundaries are drawn.

As demonstrated throughout this dissertation, the social web is an emergent experience, meaning that it is an assemblage of people and organizations, along with their social and creative practices. Such practices

connect people and organizations to one another, as well as the technologies

that mediate their interactions. Through these relationships, the participatory

practices of people and organizations bring social web spaces into existence.

The digital infrastructure of services and technologies simply supports these

interactions. People must actively seek out connections with others, facilitating

their interactions through various technologies. These technologies mediate

communication by helping participants produce different types of texts and

inscriptions, as well as by allowing them to share such texts in various ways

(Hart-Davidson et. al., 2007; Swarts, 2010). But, the capabilities of these

technologies matter most only when people leverage such functionality for

communicative needs. Those needs may shift over time, contingent on new

events, people, technologies, or other exigencies that drive the requirements of

these communities (Potts, 2009a & 2010; Spinuzzi, 2003, 2007, 2008). The

underlying technological infrastructure may persist, but the social web only

appears as participants forge links among themselves, digital systems, and the

content that is important to them.

The user experience of participation requires scholars and designers to

account for such dynamic social and creative practices. Discussing the term

network, Latour (1999b) states that the concept is "the *summing up* of

interactions through various kinds of devices, inscriptions, forms and formulae,

into a very local, very practical, very tiny locus" (p. 17). In this description, a

network is a sociotechnical assemblage that emerges as material artifacts are

used by people to form linkages. The assemblage itself—the connections

between people, groups, and technologies—can be explored as an artifact of social and technological transformation. The ways that content, people, and technologies shift in both their purpose and (in the case of technologies) their design can be traced through these relationships. Moreover, by exploring how these networks may be disassembled and reassembled can tell researchers and designers how participants are dynamically defining and re-defining participation as an experience within digital ecosystems.

With such knowledge in hand, both academic and industry practitioners can begin developing design methodologies that are based on understanding movement as a key architectural principal. Our work as researchers and designers will still include traditional information architecture, usability, interaction design, interface design, and numerous other sub-disciplines within user experience design. However, we must also take a more architectural approach to the ways that technologies can be adapted in *ad hoc* ways, stitched together by participants, and used to create meaningful, culturally-situated knowledge. The movement I have endeavored to describe throughout this dissertation means we must architect ecosystems rather than simply applications. These ecosystems must adapt to participatory activities, including social and creative practices. These ecosystems must facilitate movement and transformation, even their own transformation as cultural needs shift participatory activities and the roles of people and organizations who create these social web spaces.

6.3 THE ARCHITECTURE OF MOVEMENT

Any research methodology or approach to designing participatory experiences must begin with this movement as its basis. These experiences are dynamic and contingent, depending on the creative and social activities of participants. The foundation of my approach is that the social web is an emergent sociotechnical space rooted within the intersection between culturally situated practices and technological design. This means that researchers and industry experts need to take a very broad approach to exploring and designing for these spaces—they need to think about architecting ecosystems rather than designing applications. We need to understand how and why participatory communities leverage a wide range of systems and services to transform and move information.

As stated earlier, when people and information move through these ecosystems, their purposes, their roles, or the network connections in which they work may shift. The digital ecosystems in which participants operate are dynamic and rhizomatic. The linkages among people, groups, and technologies can change suddenly, forming and re-forming connections that carry people and information in many different directions at once. Participants forge connections in order to perform their work. Through their movement across digital ecosystems, participants and information form new passageways for content to travel. In other cases, they re-purpose existing connections to help re-contextualize information in culturally relevant ways.

Figure 6.1 illustrates the three major components of the user experience of participation. Within each component—represented as a corner—the figure also shows their respective concepts leveraged from actor network theory (ANT). Each major component highlights a way in which participation and technology intersect in the social and creative practices of participants working in digital spaces. The ANT concepts provide a rich set of tools for describing these intersections as sociotechnical spaces wherein the user experience of participation takes place. Together, these three components help form a useful approach for exploring the intersection between culturally situated participatory practices and the design of the technological infrastructures that support them. It is, then, a sociotechnical framework that sees culture and technology as deeply connected to each other. These components and their respective ANT concepts represent may not be pursued in a linear fashion. Instead, each component can guide scholars and designers in identifying necessary research questions that are relevant to specific participatory cultures and the digital ecosystems in which they work.

Figure 6.1. Situating of the User Experience of Participation as a sociotechnical method at the intersection between social and creative practices and technological design.
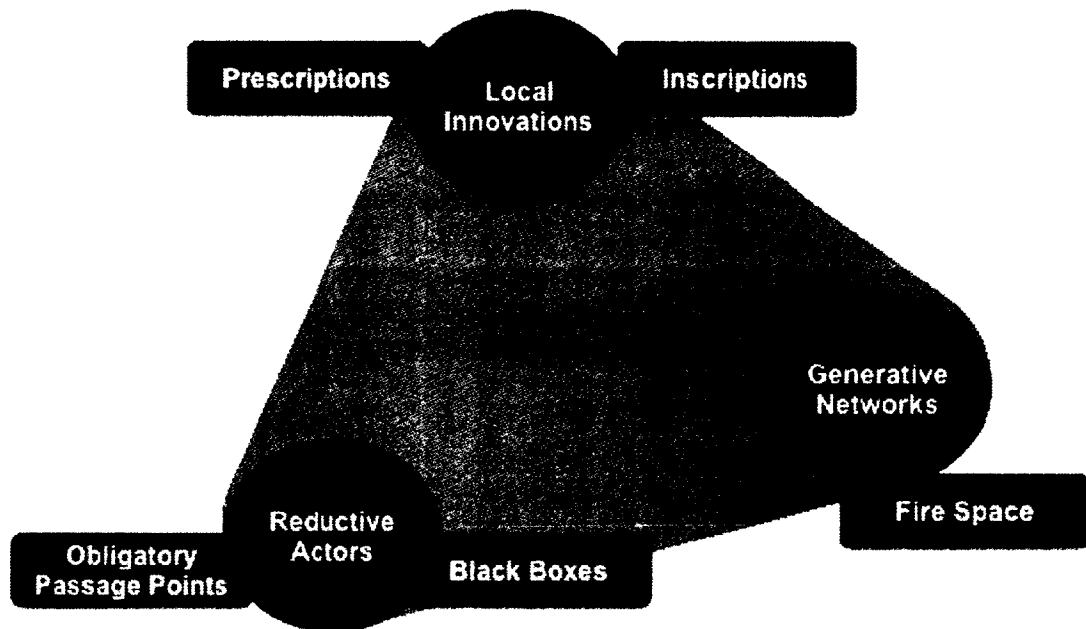
Figure 6.1 illustrates the sociotechnical connection between culture and

technology. Each component—described in more detail in the sections that

follow—provides a rich way of describing how people and technologies combine

to construct relationships and mediate participatory activities. I depict these

relationships as a triad in order to emphasize the fact that the user experience of

participation emerges at the intersection between these three components,

displayed in each corner. Local innovations explore how social and creative

practices are situated against the ways that people and organizations define

participation. Exploring reductive actors described in Chapter 4[36], allows

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[36] As outlined in Chapter 4, reductive actors reduce movement of information and people across the ecosystem.

researchers and designers to better understand how the design and

implementation of digital technologies and processes potentially disrupt culturally

situated participatory activities. Tracing generative networks[37] enables us to also

then better understand how participants leverage multiple digital spaces to

facilitate movement and transformation to produce meaningful contexts for

knowledge work. Combined, these three components enable us as scholars and

designers to harness rich insights into what makes social and creative practices

among participants meaningful to themselves and their participatory communities.

Moreover, we can gain a deeper understanding of the ways that technologies

and processes can support or hinder these practices. We are better equipped to

design not just individual sites or applications, but broader ecosystems of digital

tools and processes that are more adaptive and contextually-aware of

participatory activities. By examining the ways that movement and transformation

take place, designers can then better support localized activities whose impact

can then extend across these ecosystems. We can make ecosystems that are

adaptive to the local needs of participants. We can build digital infrastructures

that support knowledge work in contextually-aware ways.

Rather than looking for single digital systems or applications that do

everything, these communities are more often interested in managing movement

across multiple digital spaces. Participants seek methods for carefully directing

how they move across the ecosystem, as well as ways for information to move,

for the purposes of developing and enriching meaningful contexts. The user

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[37] Discussed in Chapter 5, generative networks emerge when participants create new linkages among people and technologies to generate the movement of people and information. These spaces can then help generate new knowledge in richer, more contextually-aware ways.

experience of participation depends on movement, as people transform much about the ecosystems in which they operate. Participants may alter their participatory roles to respond to new needs, such as the ways that policies are implemented by media companies to regulate participatory activities. Participants may alter the networks in which they operate, forging new connections or restricting existing ones in order to develop and share information. And they often alter and re-purpose the content that they encounter within these systems (Potts, 2009c; Swarts, 2010). Indeed, the ability to fragment, re-purpose, and reuse digital content is often one of the most important elements of digitally mediated communication (Johnson-Eilola, 2005).

As the case studies in this dissertation illustrate, there is a need to understand how transformation can occur across multiple digital spaces. More importantly, there is a critical need to understand why such changes are important within participatory cultures. With a richer knowledge of why movement and transformation are so important to these cultures, we can design richer experiences that better support knowledge work of participants within these ecosystems. For instance, a richer understanding of the ways that NyghtHawk and his peers in Chapter 3 use copyrighted content can inform the design of policies and the digital tools that support knowledge work. Throughout this dissertation, the movement of content from one digital space to another has been critically important to participants pursuing collaborative knowledge work. Supporting the movement and transformation of digital inscriptions as participants shift their work from one digital space to another is a crucial

consideration for designers creating such ecosystems. A view of the *LittleBigPlanet* experience as an ecosystem would help designers better understand how to support the movement of digital content from the game to a discussion forum.

Another implication of this research is that we can also create digital ecosystems that adapt to transformations in participatory activity over time, driven by the social and creative knowledge work of online participants. Fischer (2011) argues that digital ecosystems built around social media offer "fundamentally different ways to cope with a large number of difficult problems in which new social organizations and new media can make a difference" (p. 45). As the case studies in this dissertation demonstrate, participants use systems and digital content in ways that designers and policies cannot always anticipate. Thus, designers, policies, and systems should adapt to cultural use over time. Social web services and systems provide rich tools for the collaborative production of knowledge that is vital to participatory cultures. As is the case in the example in the previous paragraph, new instances of knowledge emerge from social and creative interactions in which people and information move from one digital space to another. In doing so, participants can forge new meaningful contexts that help them re-organize and re-purpose information to solve their own problems, or contribute their expertise and draw from that of other participants (Potts & Jones, 2011; Slattery, 2007; Spinuzzi, 2008 & 2009).

In effect, through these movements, participants are designing their own social web architectures by linking people and systems together in ways that they

find culturally relevant and contextually meaningful. Learning from such culturally-driven movement and transformation enables researchers and designers to iteratively refine the ecosystem's ability to support relationships. Rather than refining a single application's interface, we work to understand the broader scope of social web spaces wherein cultural practices grow. With careful research of participants' local practices, both scholars and designers can find richer methods for allowing different tools in the ecosystem to link together through participatory activity. A richer knowledge of how such relationships are formed and mediated through technologies enables designers to design tools that help facilitate those relationships in culturally-aware ways.

6.3.1 Identifying Local Innovations

Local innovation describes those activities, practices, processes, and spaces that participants shape through the work that they perform. Such innovations are often practices, processes, or digital content that support specific goals that are important to participants and their peers. Exploring how participants collaboratively perform knowledge work over time will enable researchers and designers to better understand the ways that they link digital technologies together. Armed with this knowledge, we can better understand how current systems or services should adapt to support such activities, or develop actionable insights to drive features and systems in technologies that offer such support. Through local innovations, participants create links, form relationships, produce content, and sometimes build their own digital spaces. Each of these is

a trace of culturally-situated activity, containing information about the importance of such activities to participatory communities. As innovations, these activities are necessarily transforming either participatory roles, the information that participants generate and share, or the technological infrastructures that support knowledge work. Such innovations might take the form of content that is produced and shared throughout digital technologies. Or, such innovations may be a unique combination of digital tools that facilitate social and creative activity. Participants may also repurpose existing content in order to support knowledge work.

As Fernheimer, Litteria, and Hendler (2011) suggest, participatory interactions through social media take place on a "web-scale." This means that participants are engaged in "transdisciplinary collaborations that encourage both knowledge production and circulation" across multiple digital landscapes (p. 324). In order to work within these ecosystems, participants often negotiate movement across several digital systems. They utilize multiple digital tools and services, often transforming their roles, their purposes, and digital content that they are producing by doing so. This movement allows participants to utilize the unique characteristics of a number of different systems.

One example is from Chapter 3 in which the *LBP* participant NyghtHawk creates costumes within the *LittleBigPlanet* game and shares images of his productions in the discussion forum LittleBigWorkshop.com. There are at least three sets of transformations in this creative activity. First, his costumes re-create popular comic book and movie characters, shifting the visual language of their

costumes from the books and films in which they are found into the production assets available within the game software. Second, he transforms the costumes he creates as in-game assets into static JPEG images, moving them from the game software to a computer in order to post them in the forum. Third, within the LittleBigWorkshop.com forum, these costumes shift roles from production assets for play to discussion topics that support learning how to use production tools within the game.

As discussed within Chapter 3, NyghtHawk's costumes are examples of *inscriptions* that are traces of knowledge work. Latour (1999a) describes inscriptions as a type of "archive" or "trace" of work (p. 306). Inscriptions are the symbols created by the transformations that participants produce through their work. The static images that NyghtHawk captures carry with them traces of the processes that he used to move content from one technology to another, from one digital space to another.[38] By doing so, the cultural purpose of the original productions—the costumes—are altered in order to support further knowledge work by participants within the forum. Those participants use NyghtHawk's inscriptions as tools for collaboratively exploring how the costumes were produced. They expand their knowledge and expertise as participants through these interactions, thus transforming their own skills and perhaps even participatory roles within the *LBP* ecosystem.

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[38] In Chapter 3, I outlined what could be discovered about this process in Figure 3.2. NyghtHawk had to produce his costumes in *LittleBigPlanet*, capture them as screenshots by either using the in-game tool for doing so or simply snapping a digital picture of his screen, and then port them over to his computer in some way. The latter is most likely accomplished with a flash drive given the Playstation 3 console's support of USB connections. Once they are on his computer, he can then upload them to the LittleBigWorkshop.com forum.

In this case, the local innovations of participants can help improve knowledge of the social and creative practices that are important within such digital cultures. The forum's significance as a digital tool is irrelevant without the connections that are forged by NyghtHawk and others. These participants have identified useful way to leverage copyrighted content that supports knowledge work, even though this content falls into a type of official limbo. Tracing these cultural practices enables researchers to understand why such content is important for these communities. For NyghtHawk and his peers, such practices support their ability to become stronger participants within their digital ecosystem. Every official policy in the ecosystem says that using copyrighted work in this way is not permitted. However, there are unofficial policies that do permit such activities.

These policies form the *prescriptions* of the moment, or the rules that set the boundaries of participation within these networks. Prescriptions define the "morality of the setting" in which digital participants work (Akrich & Latour, 1992, p. 261). In this case, the prescriptions and the moralities they define are at least partially in conflict with the local innovations of participants such as NyghtHawk and his peers. Even though their activities are in support of their work as participants, helping them develop and learn valuable participatory skills, social and creative practices place them at risk of moderation. Moreover, as Chapter 4 illustrates, they will not fully understand the extent of this risk unless their work is targeted and removed from the ecosystem by *LBP* moderators.

Thus, tensions can emerge between the inscriptions that participants produce and the prescriptions that govern or regulate at least some components of the ecosystem. Understanding such tensions and where they are located allows researchers and designers to understand the importance of policies as an important component of the design of such ecosystems. Local innovations within participatory cultures rely on meaningful interactions among participants that are rooted in shared knowledge and purpose. The social and creative practices of participants within these digital ecosystems are more than simply producing digital content and posting it on a public space. The examples of knowledge work that I describe in the case studies in this dissertation are often aimed in at least two directions. Participants want to improve their abilities as participatory actors within these digital ecosystems. They want to improve their social and creative skills, leveraging the expertise and knowledge of other participants in order to do so. In addition, these participants also work to understand how these relationships link them with other actors in these ecosystems. By doing so, participants can better adapt their activities to the constraints they face within such ecosystems. They create social web architectures that suit their needs, forging technical and social relationships between themselves, other groups, and technologies.

These instances of connection often support multiple contexts as information moves in many different directions at once (Spinuzzi, 2008). As information and participants move across the digital space, they forge connections among one another, forming the social web spaces that are so vital

to their work. It is only through movement and transformation that social web architectures begin to emerge in meaningful and useful ways. Effectively designing for knowledge work and local innovation, then, requires a sophisticated understanding of the cultures in which participants situate their activities. As participants produce content and knowledge, shifting it across the digital ecosystems in which they participate, their productions often move through multiple communities and cultures. Examining traces of cultural practice (inscriptions) and how they intersect with regulatory policies (prescriptions) can help researchers and designers understand the experience of participating within these ecosystems. Such a view forces those who design social web applications to understand participants work across the ecosystem. In addition, practitioners must understand how the design of digital applications and moderation processes can critically impact participatory practices that they may want to support.

6.3.2 Tracing Reductive Actors

Because these relationships are situated within digital cultures, it is important to understand how the design of digital technologies in these ecosystems attempt to define participation. To do so, researchers can trace how systems and processes support or hinder movement. As illustrated in Chapter 4, reductive actors are designed to reduce movement in some way. They guide participatory activity through specific, rigid channels in an effort to hide how processes work within the ecosystem. Thus, the goal of researchers examining

reductive actors within these ecosystems is to identify both these channels and the processes or network connections that are veiled by them.

Drawing again from actor network theory, Chapter 4 describes these channels and the processes they can help mask as *obligatory passage points* and *black boxes*, respectively. An obligatory passage point is formed when one actor asserts itself within the ecosystem as a necessary pathway for information and activity to flow throughout the network (Callon, 1986). Within social web spaces, this means that a person, organization, technology, or process is situated within the ecosystem so that critical social and creative activity must move through that actor. In this way, the passage point can "determine a set of actors and define their identities," assuming significant authority over the assemblage (p. 6). In doing so, the obligatory passage point can then construct one or more black boxes in which important processes and relationships among various actors can be masked. As Latour (1987) states, a black box is "made up of many more parts and it is handled by a much more complex network, but it acts as one piece" (p. 131). Furthermore, for other actors, the black box appears as "one object" within the assemblage (p. 131). The various actors within, including people and technologies, as well as the processes they perform are locked from view, appearing as only single entities that are "entirely opaque" (Latour, 1999a, p. 183). Their inner workings are rendered invisible to anyone operating outside of the black box. When obligatory passage points and black boxes combine, they can form reductive actors that can exert significant control

over the movement that may take place within certain corners of these

ecosystems.

Within reductive actors, researchers and designers find one seat of power

within these digital spaces. If the assemblages of these networks is often

rhizomatic, facilitating the movement of information across multiple channels and

spaces, then the reductive actor is the antithesis of the rhizome. Instead of

fostering multiple channels for communication, it asserts the primacy of specific

pathways. The reductive actor requires movement through narrowly defined

channels, assuming control over what can and cannot pass through the

obligatory passage point. The case study from Chapter 4 outlines how the

interface of the moderation system known as the Good Grief! System becomes a

necessary conduit through which Sony and Media Molecule assess participant

activities and the content that they produce. Moreover, the processes with which

moderation decisions are made and enforced are rendered invisible to

participants. Thus, there is only a single channel through which moderation takes

place, and that single channel masks the processes that moderators use to

assess participant-generated content.

A reductive actor stifles movement, both directly and indirectly. At

minimum, it makes the local innovations of participants—such as using

copyrighted content as a tool for improving skills—a very risky endeavor for

participants. They may still be able to pursue their activities through the social

and digital infrastructures they have assembled. However, the reductive actor is

forming its own linkages and relationships within the network from which it can

observe those activities and determine their legitimacy. In the case of the *LBP* ecosystem, the Good Grief! System has significant authority to define what participation is by implementing policies in dynamic and unpredictable ways. Using copyrighted content may be permitted at one time within the ecosystem. But, this tolerance may shift without warning. From its position within the actor network, the reductive actor can determine what activities are acceptable. It is a combination of policies, people, and technologies that can define participation in unpredictable and even uncontestable ways.

In the examples I have outlined within this dissertation, reductive actors establish a tension between technological design and local innovations. They restrict or deny the movement that is vital to participatory cultures. Whereas local innovations often seek to make much about the user experience of participation kinetic, reductive actors seek to impose stasis within parts of the digital ecosystem. In the case outlined in Chapter 4, processes and policies become either immovable in the sense that they cannot evolve, or they are allowed only to evolve in ways that participants cannot see or anticipate. For these reasons, social and creative activities that are vital to their cultures become very risky ventures for participants.

6.3.3 Tracing Generative Networks

The power within these digital spaces is not simply a unidirectional force that cascades from the top-down. Reductive actors may assume strong positions from which to assert their authority (Callon, 1986). However, because these

spaces often involve a wide array of people and technologies, reductive actors

may not always extend to across the ecosystem. Such is certainly the case within

LBP. Participants may turn to other digital systems, assembling them into the

social web in which they are participating. Their goal is facilitate movement that

can either bypass reductive actors or pull crucial information out of those

reductive actors. To put it another way, participants want to mitigate the effects of

at least one of the major components of the reductive actor: either the obligatory

passage point or the black box.

To do so, they generate *fire space* by restructuring connections among

people, organizations, and technologies. Law and Mol (2003) describe fire space

as "the *continuity of shape as an effect of discontinuity*. As with fluid constancy,

movement rather than stasis is crucial. Without movement there is no

consistency" (p. 7). In their definition, Law and Mol describe networks as fluid

spaces driven by the co-constructive social activities of people and technologies.

A fire space is one in which these activities are often "abrupt and discontinuous,"

meaning that they can emerge and disappear rapidly (p. 7). Through this

movement, participants in these networks are able to maintain meaningful

contexts because they can resituate themselves within the network, restructure

connections among actors, and re-contextualize information when necessary

(Potts & Jones, 2011). This movement is the basis for participation within digital

ecosystems. It facilitates local innovation by allowing assemblages of people,

groups, and technologies to adapt to changes that are required at specific

moments within specific cultures.

If a reductive actor defines participation by trying to reduce movement of people and information, then participants turn to these other network actors and restructure their connections in order to introduce their own definitions. Using fire space, they negotiate over what participation is and how the network should facilitate it. Participants within these spaces become stronger rhetors, arguing for the participatory roles they believe to be most important (Spinuzzi, 2008). By creating fire space, participants are introducing new connections. Much like they do within local innovations, participants are leveraging their social and creative practices. Only at this level, rather than focusing on specific skills or ways to generate content, participants are re-inscribing the ecosystem and the ways that actors are arranged and connected. As Chapter 5 illustrates, they can do so by leveraging actors outside if the immediate influence of the reductive actor described in Chapter 4. Participants turn to the same sort of digital systems and software—social networking services, discussion forums, blogs, etc.—that they may use for developing local innovations. But, their topics of discourse shift from ways to produce and share content to scrutinizing the definitions of participation that may be implicit in the design of technologies.

Exploring generative networks enables scholars and designers to understand how cultural knowledge emerges from participation. These spaces bear the marks of participatory activities, illustrating how new people and technologies are linked across the ecosystem to help share and produce information. Learning how and why these activities take place allows us to make

better decisions regarding how systems should connect to support knowledge work, as well as how such spaces might be governed or regulated.

6.4 FINAL CONSIDERATIONS

Researching and designing participatory ecosystems requires that scholars and practitioners work to understand the cultures that leverage digital technologies. Participation occurs at the intersection between culturally-situated practices and the technologies that participants use to mediate their activities. Thus, researchers and designers should consider what movement is taking place within these spaces and why it is meaningful to participatory communities. Participatory activity can re-inscribe the purposes of existing technologies, adapting their usage for culturally meaningful knowledge work. In other cases, participants may design and create their own digital environments for the purpose of participation in order to forge their own user experience of participation.

Fischer (2011) argues that designers should "underdesign for emergent behavior," opting instead to create "seeds for open, living repositories and contexts in which participants can create content, cope with exceptions, design work-arounds, and engage in negotiations" (p. 52). His concept is to leave the digital ecosystem much more vaguely defined in terms of the processes, work flows, and individual tasks that such systems support. Crumlish and Malone (2009) make a similar suggestion, stating that designers should "leave things incomplete," allowing participants the "opportunity to 'finish' the design

themselves" (p. 17). Doing so not only empowers participants to define the social web experiences they want or need, but it also allows the technologies they use to adapt to participants' local innovations.

As Nardi (1996) states, meaningful contexts are "constituted through the enactment of activity involving people and artifacts" (p. 76). In other words, the meaning that attaches to participatory practices emerges as people use technologies to produce, share, and interact with artifacts. This is why the social web is an emergent space. The user experience of participation depends less on what technologies do and more on the ways that participants use them in their knowledge work. More importantly, the user experience of participation is very tightly coupled with the ways that participants share and coordinate these activities. As the examples in this dissertation show, their efforts are often distributed so as to take advantage of the "expertise [of] a variety of individuals who must coordinate their efforts" (Slattery, 2007, p. 312). Part of the local innovation that participants rely upon is the ability to leverage multiple types of expertise that are spread across time and space.

It is crucial in the research and design of these digital ecosystems to account for the culturally-situated practices. This means that digital technologies must adapt to cultural use. Without doing so, we cannot fully support participatory knowledge work that takes place within such ecosystems. Most importantly, with the methodology outlined in this dissertation, researchers and industry practitioners can better understand how and why ecosystems should adapt to participatory activities as they evolve within cultural contexts. In social web

spaces, the movement of people and information is critical to such context. Such movement allows multiple participants to pool their individual expertise and collectively construct knowledge. This is the promise of participatory cultures, especially those that work through social web technologies. As researchers and designers rooted in an understanding of human communication, we can explore the intersection between technological design and cultural participation as a fundamental part of meaningful communicative experiences. We can drive the future design and architecture of ecosystems that facilitate web-based communication. In doing so, we can also shape the future of communication design as a field and leverage our knowledge to produce a richer understanding of online cultures, their activities, and the practices that sustain them.

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VITA

David L. Jones
Department of English
Norfolk, VA 23529

ACADEMIC APPOINTMENTS

CeME Lab Graduate Research Assistant
Old Dominion University | Fall 2009 to Summer 2011

Graduate Teaching Assistant
Old Dominion University | Spring 2010

Graduate Assistant
Morehead State University | Fall 2001 to Spring 2003

EDUCATION

PhD English, Professional Writing (anticipated 2013)

MA English, Creative Writing emphasis (2003)

BA English (2001)

SELECTED PUBLICATIONS

Peer Reviewed Journal Articles
Potts, L. & Jones, D. (2011). Contextualizing experience: Tracing the relationships between people and technologies in the social web. *Journal of Business and Technical Communication 25*(3), 338-358. Nominated for 2013 NCTE Technical and Scientific Communication Award for Best Article on Philosophy or Theory of Technical or Scientific Communication.

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Jones, D. & Lamb, J. (in progress for 2013). *Kinetic Architectures for Participation: Designing Social Web Applications for Professional Learning.* ACM SIGDOC.